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Access DB# 78630

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: CLIFF CROWDER Examiner #: 59604 Date: 10/24/02
Art Unit: 3700 Phone Number 308-0949 Serial Number: 09/312,992
Mail Box and Bldg/Room Location: CP4 5-B33 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Large Diameter Spirally Formed Pipe

Inventors (please provide full names): Scott E. JOHNSTON

Earliest Priority Filing Date: 5-18-98

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

1:39 PM

STAFF USE ONLY

Searcher: <u>JEANNE HERRIGAN</u>	Type of Search	Vendors and cost where applicable
Searcher Phone #: <u>305-5924</u>	NA Sequence (#) _____	STN <input checked="" type="checkbox"/> _____
Searcher Location: <u>CP2-2008</u>	AA Sequence (#) _____	Dialog <input checked="" type="checkbox"/> _____
Date Searcher Picked Up: <u>10/28</u>	Structure (#) _____	Questel/Orbit _____
Date Completed: <u>10/28</u>	Bibliographic <input checked="" type="checkbox"/> _____	Dr. Link _____
Searcher Prep & Review Time: <u>197</u>	Litigation _____	Lexis/Nexis _____
Clerical Prep Time: _____	Fulltext <input checked="" type="checkbox"/> _____	Sequence Systems _____
Online Time: <u>113</u>	Patent Family _____	WWW/Internet <input checked="" type="checkbox"/> _____
	Other _____	Other (specify) _____

PTO-1590 (8-01)

9:20 - 335

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	IS&R	L1	8	(("2751672") or ("2986193") or ("3380147")).PN.	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/2 8 09:30			0
2	IS&R	L2	0	("spirally").PN.	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/2 8 09:32			0
3	BRS	L3	46372	spirally	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/2 8 09:32			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
4	BRS	L4	5248853	formed	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBMTDB	2002/10/28 09:32			0
5	BRS	L5	969464	pipe	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBMTDB	2002/10/28 09:33			0
6	BRS	L6	415410	building	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBMTDB	2002/10/28 09:33			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
7	BRS	L8	0	"spirally formed building"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM-TDB	2002/10/28 09:34			0
8	BRS	L9	16	"helically formed pipe"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM-TDB	2002/10/28 09:34			0
9	BRS	L10	0	"helically formed building"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM-TDB	2002/10/28 09:34			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
10	BRS	L11	2030	"spirally formed"	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:49			0
11	BRS	L12	1170	"helically formed"	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:49			0
12	BRS	L13	3176	11 or 12	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:50			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
13	BRS	L14	0	13 and caisson	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:51			0
14	BRS	L7	47	"spirally formed pipe"	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:52			0
15	BRS	L15	118	13 and corrugated	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM TDB	2002/10/28 09:52			0

October 28, 2002

TO: Cliff Crowder, Art Unit 3700
PARK 1, Room 5-B-33

FROM: Jeanne Horrigan, EIC-3700 *JH*

SUBJECT: Search Results for Serial #09/312992

Attached are the search results for the "Large Diameter Spirally Formed Pipe," including results of prior art and inventor searches in foreign patent databases, and prior art searches in metals, chemicals, other materials, and manufacturing non-patent databases. I also searched the Internet and commercial databases for pertinent information about the companies, association, and world congress mentioned in the attachments to your request, but could not find anything that seemed to me to be pertinent to the search.

In the results, a highlighted line marks the end of a search, including the search strategy, in a particular set of databases and the beginning of a new search in a different set of databases.

I tagged the items that seemed most relevant to me, but *I suggest that you review all of the results.*

Also attached is a "Search Results Feedback Form." Your feedback will help enhance our search services.

I hope these results are useful. Please let me know if you would like me to expand or modify the search or if you have any questions.

(c) 2002 RAPRA Technology Ltd. All rts. reserv.
00319685

TITLE: CORRUGATED PIPE GAINS MOMENTUM
SOURCE: British Plastics and Rubber; Sept.1986, p.7
ISSN: 0307-6164

JOURNAL ANNOUNCEMENT: 198612 RAPRA UPDATE: 198624

DOCUMENT TYPE: Journal Article

LANGUAGE: English

ABSTRACT: A production line said to be the world's first for double-wall, spirally wound, corrugated HDPE pipe has been produced by Corma Inc. **It will be used for pipe of 15ins. internal diameter and bigger, for sewers, storm and agricultural drainage and service ductings.**

9/7/9 (Item 7 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.
00319683

TITLE: DOUBLE WALL, SPIRAL WOUND PIPE LINE FROM CANADA
SOURCE: European Plastics News; 13, No.9, Sept.1986, p.62
ISSN: 0306-3534
CODEN: EUPNBT JOURNAL ANNOUNCEMENT: 198612 RAPRA UPDATE: 198624
DOCUMENT TYPE: Journal Article
LANGUAGE: English

ABSTRACT: Details are given of a line to produce double wall, spiral wound corrugated HDPE pipe from Corma Inc., Canada. The double wall design consists of a corrugated outer layer and a smooth inner layer, made from HDPE or PP. End uses include storm and sanitary sewers, agricultural drainage, culverts and utility ducting. Machines will accept tooling in a range of pipe sizes from **380mm to 1525mm in diameter** by using three interchangeable mandrels.

9/7/10 (Item 8 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.
00269912

TITLE: CORRUGATED PIPE MADE CONTINUOUSLY
SOURCE: British Plastics and Rubber; March 1985, p.23
ISSN: 0307-6164
JOURNAL ANNOUNCEMENT: 198506 RAPRA UPDATE: 198512
DOCUMENT TYPE: Journal Article
LANGUAGE: English

ABSTRACT: The installation of two large- diameter corrugated plastic pipe production systems by Corma for producing culvert and collector drainage pipe is briefly discussed. Pipe sizes and output rates for the Spiral - Wound Pipe systems are given.

9/7/12 (Item 10 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.
00213815

TITLE: PATENTED PROCESS FOR WIDE PIPES
CORPORATE SOURCE: Corma Inc.
SOURCE: British Plastics and Rubber; June 1982, p.44
ISSN: 0307-6164
JOURNAL ANNOUNCEMENT: 198209 RAPRA UPDATE: 198203

DOCUMENT TYPE: Journal Article
LANGUAGE: English

ABSTRACT: The company has patented a continuous process for the manufacture of large diameter pipes , designated the Spiral - Wound Pipe System, where a plastics strip or profile is extruded and spirally wound and fused to form a pipe via a double helical mandrel. The process is suitable for culverts, sewer pipe , and liquids transporting and slurry pipes .

9/7/13 (Item 11 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2002 RAPRA Technology Ltd. All rts. reserv.
00210826

TITLE: PIPES OF ALL TYPES WITH NO JOINTS

CORPORATE SOURCE: Corma Inc.

SOURCE: Plastics and Rubber Weekly; No.937, 15th May 1982, p.9

ISSN: 0032-1168

JOURNAL ANNOUNCEMENT: 198207 RAPRA UPDATE: 198201

DOCUMENT TYPE: Journal Article

LANGUAGE: English

ABSTRACT: Brief details are presented on the above company's Spiral - Wound process for production of very large diameter plastics pipes. Types of pipes suitable for manufacture using this process are listed.

File 35:Dissertation Abs Online 1861-2002/Oct
File 323:RAPRA Rubber & Plastics 1972-2002/Dec
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

Set	Items	Description
S1	71065	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	427	SPIRAL?(3N) (WIND??? OR WOUND OR FORM???)
S3	19312	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?
S4	27062	DIAMETER?? OR DIAMETRE??
S5	18574	HELIX?? OR HELIC???
S6	16	S1 AND S3 AND S4 AND (S2 OR S5)
S7	15	RD (unique items)
S8	2	S7/2002 OR S7/2001 OR S7/2000 OR S7/1999
S9	13	S7 NOT S8

6/6,K/1 (Item 1 from file: 621)
DIALOG(R)File 621:(c) 2002 The Gale Group. All rts. reserv.
01112327 Supplier Number: 40829127 (USE FORMAT 7 FOR FULLTEXT)
RESISTANCE HEATING ELEMENTS OF OUTSTANDING HIGH TEMPERATURE STRENGTH AND
LIFE

June 15, 1989

Word Count: 387

... have been confirmed in a wide series of
field trails with elements variously supported in grooves , spirally
wound on tubes , or embedded in ceramic fibre insulation. In all
instances, and at rated maximum operating temperature...

File 621:Gale Group New Prod.Annou.(R) 1985-2002/Oct 25
File 635:Business Dateline(R) 1985-2002/Oct 26

Set	Items	Description
S1	59037	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	279	SPIRAL?(3N) (WIND??? OR WOUND OR FORM???)
S3	46757	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?

Serial 09/312992
Searcher: Jeanne Horrigan
October 28, 2002

80

S4	16269	DIAMETER?? OR DIAMETRE??
S5	2792	HELIX?? OR HELIC???
S6	1	S1 (5N) (S2 OR S5) (5N) S3
S7	0	S1(S) (S2 OR S5) (S) S3(S) S4

3/26, TI/1 (Item 1 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014677969

WPI Acc No: 2002-499026/200253

Production of aromatic thermal wrap, involves placing mixture of liquid aromatic compound and inert absorbent compound, and unhydrated superabsorbent polymer inside sachet and closing sachet

3/26, TI/2 (Item 2 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014641598

WPI Acc No: 2002-462302/200249

Surfboard comprises chamber in which fin is inserted and fixed at desired posture by screw passing through tapped holes in fin box

3/26, TI/3 (Item 3 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014470997

WPI Acc No: 2002-291700/200233

Lighting control program execution method for light emitting diodes, involves generating control signals based on characteristics of digital audio input, during execution of program

3/26, TI/4 (Item 4 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014205805

WPI Acc No: 2002-026502/200203

Computer system e.g. PC, microcomputers, sends request with token as password to authentication system, when response is not received from authentication system while passing concatenated user identifier and token

3/26, TI/5 (Item 5 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
014050955

WPI Acc No: 2001-535168/200159

Animation effecting method involves positioning slit over body part chosen from body muscle and simultaneously opening and closing slit such that sublayer portion animates body portion being moved

3/26, TI/6 (Item 6 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
013966192

WPI Acc No: 2001-450406/200148

Pipe arching apparatus for use in flattening and elongating pipe, has internal mechanism for flattening and elongating lower periphery of pipe positioned on ground

3/26, TI/7 (Item 7 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
013549899

WPI Acc No: 2001-034105/200105

Modular drill cutter for treating drill cuttings comprises pump,
treatment container, switch gear, and module to be coupled to
input/output, another module and/or power source

3/26, TI/8 (Item 8 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
013291780

WPI Acc No: 2000-463715/200040

Radiator fan assembly for passenger car, truck, has opposingly rotating
mechanical radial flow fan and electrical axial flow fan, mounted in
series on common shroud

3/26, TI/10 (Item 10 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
012867569

WPI Acc No: 2000-039402/200003

Producing fluids, e.g. oil and gas from subsea wellbore

3/26, TI/11 (Item 11 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
011293940

WPI Acc No: 1997-271845/199724

Filter and valve assembly for dental instrument - installed in line
supplying water to instrument incorporating microporous filtering
membrane and one way valve

3/26, TI/12 (Item 12 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
011143434

WPI Acc No: 1997-121358/199712

Private wireless telecommunication system for mobile communications - has
voice communications for particular handset always routed through
respective home base station, irrespective of identity of base station
within whose service area handset is currently located

3/26, TI/13 (Item 13 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
011143433

WPI Acc No: 1997-121357/199712

Private radio mobile communications system - associates each radio unit
with respective base station as its 'home' base station with any radio
unit able to communicate with any base station in whose service area it
is located

3/26, TI/14 (Item 14 from file: 350)
DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.
011143432

WPI Acc No: 1997-121356/199712

Base station for private telecommunications system - includes radio interface for communication with radio units, telephone interface for connection to telephone line and LAN interface for connection to local area network

3/26, TI/15 (Item 15 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

009450351

WPI Acc No: 1993-143876/199317

Device for use in connection with dental tools that employs water line for conveying water to patients mouth - includes housing formed with inlet and outlet port with quick connect inlet and outlet fittings on ports

3/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007968741

WPI Acc No: 1989-233853/198932

Detection of specific nucleic acid sequence in sample - by detecting RNA transcripts synthesised from nucleic acid which includes the sequence

3/7/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

012924221 **Image available**

WPI Acc No: 2000-096057/200008

Vehicle transportable spiral pipe manufacturing apparatus

Patent Assignee: JOHNSTON S E (JOHN-I)

Inventor: JOHNSTON S E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6000261	A	19991214	US 9769620	A	19971215	200008 B
			US 98212048	A	19981215	

Priority Applications (No Type Date): US 9769620 P 19971215; US 98212048 A 19981215

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6000261	A	13	B21C-037/12	Provisional application US 9769620

Abstract (Basic): US 6000261 A

NOVELTY - A coil (12) is supported in an uncoiler assembly (30). Cylindrical rollers (20) feed the sheet of uncoiled material into spiral forming assembly (40) so as to form the pipe (114). Support stands (60) unload the pipes for transportation to various locations. A structural extension arrangement enables transferring the coil to uncoiler assembly.

DETAILED DESCRIPTION - A motor is coupled to the uncoiler assembly. The sheet is curved up while joining its edges for forming the pipes. An INDEPENDENT CLAIM is also included for vehicle transportable method of spirally forming pipes from coiled steel sheet.

USE - For producing corrugated lockseam pipes and smooth welded seam pipes.

ADVANTAGE - Enables readily transporting pipes without limitation

with respect to diameter and length of the factory style machines.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective view of portable spiral pipe forming machine.

Coil (12)
Rollers (20)
Uncoiler assembly (30)
Spiral forming assembly (40)
Support stands (60)
Pipe (114)
pp; 13 DwgNo 1/10

Derwent Class: P51

International Patent Class (Main): B21C-037/12

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200268

File 344:Chinese Patents Abs Aug 1985-2002/Oct

File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)

File 371:French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	8	AU='JOHNSTON S E'
S2	8	AU='JOHNSTON S'
S3	16	S1 OR S2

File 348:EUROPEAN PATENTS 1978-2002/Oct W03

File 349:PCT FULLTEXT 1979-2002/UB=20021024,UT=20021017

>>>No sets currently exist

8/6,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
00819207 INSPEC Abstract Number: A75070765, B75039288

Title: Shunt impedance of spiral loaded resonant RF cavities

Publication Date: 1975

...Abstract: transmission line, a model for shunt impedance is developed. The model is applicable to loosely wound spirals in large **diameter** containers. Theoretical shunt impedance is given for spirals wound from tubing of circular or rectangular cross section. The former produces higher shunt impedance. Measurements made at Oak Ridge National Laboratory on 17 copper cavities are described which support the theoretical results. Theoretical results...

...Identifiers: loosely wound spirals in large **diameter** containers...
... spirals wound from tubing ; ...
...circular cross section tubing ;

8/6,K/2 (Item 1 from file: 8)

DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
05101065

Title: Application of micro-spiral- corrugated welded tubes with optical fibers

Conference Title: Proceedings of the 1998 68th Annual Convention

Publication Year: 1998

...Abstract: fibers are applied in aerial cables. An improved cable design by a reduction of the **diameter** of more than 20 percent can be obtained by a new micro corrugation . Tube **diameters** of 3 mm to 6 mm are provided with this micro corrugation and the thin metal sheaths are about 0.1 to 0.15 mm. This mechanical forming process preferably in

spiral corrugation improves the transverse stability by a factor of 3 to 5. With this tube design, compact optical cables with 200 fibers and more can be produced. (Author abstract) 11...

Descriptors: Optical cables; Tubes (components); Optical fibers; Corrugated metal; Cable sheathing; Wire drawing; Steel

Identifiers: Micro corrugation ; Cable design; Optical ground wire

8/6,K/3 (Item 2 from file: 8)

DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
02843257

Title: Concentration profile and pressure loss for gas-solid mixture flow in a horizontal spiral tube .

Publication Year: 1989

...Abstract: sectional flow area and the pressure gradient for gas-solid mixture flow in a spiral tube with three shaped groove tube walls have been carried out using a horizontal pipeline. Three kinds of particles in the range of 2.52 to 3.50-mm mean **diameter** were used in the test for pressure gradient. Photographic data for the solid concentration profiles in the spiral tube reflected the symmetric suspension flow patterns in the low air velocity range. It was also...

...minimal air velocity was required to keep particles from depositing on the bottom of the pipe decreased compared to that of a circular pipe within a certain range of gas-solid mixture transport in the spiral tube . The empirical formula for the friction factor for gas-solid mixture flow obtained by considering the effect of...

...Descriptors: Two Phase; TUBES

Identifiers: SPIRAL TUBES ; GAS-SOLID MIXTURE FLOW; CONCENTRATION PROFILE; PRESSURE LOSS; SALTATION VELOCITY

8/6,K/4 (Item 1 from file: 34)

DIALOG(R)File 34:(c) 2002 Inst for Sci Info. All rts. reserv.
05043710 Genuine Article#: TL879 Number of References: 64

Title: AXON-GLIAL RELATIONSHIPS IN THE ANTERIOR MEDULLARY VELUM OF THE ADULT-RAT (Abstract Available)

...Abstract: criteria, which comprised small cells supporting the short, thin myelin sheaths of 15-30 small **diameter** axons (Type I), through intermediate types (II & LII), to the largest cells forming the long, thick myelin sheaths of 1-3 large **diameter** axons. Rip antibody and ferric ion-ferrocyanide staining, together with intracellular dye injection, revealed oligodendrocyte...

...Ranvier, and the spatial disposition of the outer cytoplasmic rims of myelin sheaths. The latter formed a conspicuous spiral ridge on the exterior surface of myelin sheaths which connected with the paranodal loops at each...

...where the heminodes of central and peripheral myelin were apposed, and where the basal lamina tubes of the Schwann cell units were discontinued. The basal processes of ependymal cells lining the...

8/6,K/6 (Item 1 from file: 94)

DIALOG(R)File 94:(c)2002 Japan Science and Tech Corp(JST). All rts.reserv.
01872491 JICST ACCESSION NUMBER: 93A0808454 FILE SEGMENT: JICST-E
Heat Transfer Characteristic of Multi- Grooved Tubes (Effect of Tube **Diameter** and Specification)., 1993

ABSTRACT: Multi- Grooved Tubes in which many fine spiral grooves were formed on the inside surface have generally been used heat exchangers for refrigerations and air conditioners. In this report,

heat transfer performances of tubes with outer **diameter** from 15.88 mm to 4.00 mm were measured. And, it is found that the performances of Multi-Grooved Tubes from large to small size tubes is efficient in condensing and evaporating compared with that of bare tubes.

(author abst.)

DESCRIPTORS: heat transfer pipe ; ...

... groove ; ...

... smooth pipe ; ...

... tube **diameter** ; ...

... copper pipe ;

BROADER DESCRIPTORS: pipe classified by application...

... pipe ; ...

... pipe classified by morphology...

... **diameter** ; ...

... metal pipe ; ...

... pipe classified by material

8/6,K/7 (Item 2 from file: 94)

DIALOG(R) File 94:(c)2002 Japan Science and Tech Corp(JST). All rts.reserv.

01711228 JICST ACCESSION NUMBER: 93A0278884 FILE SEGMENT: JICST-E

Collection Efficiency of Stemflow Sampler for Monitoring Effect of Acid Rain on Forest Ecosystem., 1992

...ABSTRACT: of acid rain on the forest ecosystem. The samplers were two type of vinyl chloride tube (one-fourth of which was cut off, was wound around twice in a spiral), one Silicone groove (the groove was wound around twice in a spiral), one gauze (two twisted gauze was wound around in a spiral), and one shampoo-hat type with polypropylene film (surrounded with 20cm height film cylindrically). Collection efficiency of sampler was in the order of shampoo-hat > vinyl chloride tube > gauze > silicon groove, and that by gauze type was fluctuated significantly by rainfall conditions. Concentrations of main components by shampoo-hat type were lower than those by vinyl chloride tube. These results indicated that the monitoring is possible by using shampoo-hat type, based on...

...large, for example, by event-one week sampling period for Chamaecyparis obtusa with ca. 15cm **diameter** (breast height), rainwater was overflowed from the 20l reservoirs many times, so it is necessary...

8/6,K/8 (Item 3 from file: 94)

DIALOG(R) File 94:(c)2002 Japan Science and Tech Corp(JST). All rts.reserv.

01616249 JICST ACCESSION NUMBER: 92A0617170 FILE SEGMENT: JICST-E

HNG pipe for district heating and cooling., 1992

ABSTRACT: This is a flexible, long, completely prefabricated pipe and it is possible to carry out construction in short period regardless of landform and geological features. And, this pipe is excellent in corrosion resistance, thermal insulation and can be buried directly under a road. This pipe consists of the following three components: inner most corrugated spiral tube formed from copper bar, intermediate layer of hard urethane foam, and outer corrugated spiral tube formed from band steel. There are no problems about the strength. The joint is of peculiar wave extension system. Size of this tube is 235mm of the largest inside **diameter**, 70m of standard length.

...DESCRIPTORS: piping system...

...buried pipe ;

...BROADER DESCRIPTORS: pipe classified by application... pipe ;

8/6,K/9 (Item 1 from file: 103)
DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
02947810 NEDO-90-920182; EDB-90-165054
Title: Super absorption chiller/heater, C!' series
Original Title: Super kyushu reionsuiki C series
Publication Date: 1 Jun 1990
...Abstract: performance of the machine, a high temperature generator was
changed from that of flue-smoke tube type to flue-fluid tube one,
then the efficiency of the machine increased by three-percent, and the
weight decreased by 20% as well. Heat transfer tubes were altered to
those of corrugated shape, then the heat transfer of the condenser
was improved by 50%, and that of...
...due to the same alteration. By the improvement of the dimensions as well
as the form of the spirals which compose its fin, the heat transfer
of the heat exchanger was improved by 16...
...of the previous machine. According to the optimization of its heating
capacity and of pd- **diameter** by the adoption of pd-cell system, the
discharge rate of non-condensing gas (mainly...

8/6,K/10 (Item 2 from file: 103)
DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
01606640 FRG-84-07643; EDB-85-113421
Title: Catalyst support for internal combustion engines made of conical
helically wound metal strips
Original Title: Katalysator-Traegerkoerper fuer Verbrennungskraftmaschinen
aus konisch wendelfoermig gewickelten Blechstreifen
Publication Date: 4 Oct 1984
...Abstract: catalyst support for internal combustion engines made of a
support matrix with smooth and/or corrugated metal tapes, which are
wound helically and/or spirally and are fixed with a joint in a
jacket tube. Damage due to changing mechanical and thermal stresses
should be avoided here. The support matrix...
...where the ratio of the width of the metal tapes to the spacing or the
diameter is selected so that no crossection through the winding cuts
all the positions of the...
...the metal tapes. In this way, radial expansion will not be prevented by
the jacket tube. In order to achieve a sufficient length of catalytic
path, several matrix parts can be...

8/7/5 (Item 1 from file: 63)
DIALOG(R)File 63:Transport Res(TRIS)
(c) fmt only 2002 Dialog Corp. All rts. reserv.
00345715 DA
PREPARING AND GROUTING DUCTS IN PRESTRESSED CONCRETE MEMBERS. 2ND EDITION
AUTHOR(S): Budge, CJ
CORPORATE SOURCE: Cement and Concrete Association, Wexham Springs, Slough
SL3 6PL, Buckinghamshire, England
REPORT NUMBER: No. 47.012 Monograph
Pag: 7p
PUBLICATION DATE: 19810000 PUBLICATION YEAR: 1981
LANGUAGE: English SUBFILE: HRIS; IRRD (H 8202; I)
SOURCE ACCESSION NUMBER: IRRD 257825
IRRDOCUMENT NUMBER: IRRD 257825
ISSN: 01436880 ISBN: 0-7210-1233-7
FIGURES: 2 Fig.

REFERENCES: 10 Ref.

DATA SOURCE: Transport and Road Research Laboratory

ABSTRACT: The duct design should avoid sudden changes in either the alignment or the inside **diameter** of the duct. Requirements of **diameter**, injection points. Vents and drain holes are given. **Spirally wound corrugated steel ducting** is generally used, the alternatives of steel tube and inflatable rubber cores being only occasionally employed. Duct assembly and installation are discussed. Before concreting, ducts should be inspected for flaws, and methods of inspection, testing and preparation of ducts are discussed. Requirements for cement, fine aggregates, where necessary, and water are given. The main categories of admixtures in use for grouting include: (a) workability aids; (b) air entraining agents; (c) retarders; (d) gas-forming admixtures. The fluidity, sedimentation and volume change, and the compressive strength are discussed. A high-speed mechanical (colloidal) grout mixer should always be employed. Details of mixing and pumping and the equipment required are given. The author stresses that the grouting operation should always be carried out by experienced operatives and that comprehensive records should be kept. The process of grout injection, the precautions to be taken when grouting in cold weather and the special attention required by vertical or inclined ducts, with an overall height of more than 10 M are described. Appendices on the flow cone test (marsh tunnel viscometer), pressure development in grouting and the use of gamma radiography to detect faults are included. Safety precautions are listed. (TRRL)

SUBJECT HEADING: H33, CONSTRUCTION; 3T32, CONCRETE; 3T53, CONSTRUCTION OF BRIDGES AND RETAINING WALLS

8/7/11 (Item 3 from file: 103)

DIALOG(R) File 103:Energy SciTec

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00670902 ERA-05-036606; EDB-80-110429

Author(s): Doucette, E.; Shelley, S.

Title: Heat exchange system (Patent)

Patent No.: US 4210199

Patent Assignee(s): Doucette Ind Inc

Patent Date Filed: Filed date 14 Jun 1978

Publication Date: 1 Jul 1980

p vp

Language: English

Abstract: A description is given of a heat exchange system comprising in combination, (A) a first tube system comprising a plurality of substantially parallel similar tubes, and (B) return members connecting similar ends of adjacent tubes to form a first fluid passage having inlet and outlet means adjacent opposite ends thereof, (C) a second tube system comprising a plurality of similar tubes of larger **diameter** than the tubes of said first system and respectively surrounding at least portions of the same between opposite ends thereof, and (D) additional connecting means positioned inwardly from the outer ends of the tubes of said first tube system and connected between similar ends of adjacent tubes of said second tube system for intercommunication therebetween to form a second fluid passage having fluid inlet and outlet means surrounding the tubes of said first tube system; (E) the improvement comprising leak-conducting means substantially coaxial and coextensive with said tubes of said first tube system and comprising supplemental tubular

wall means surrounding said tubes of the first system in spaced relationship thereto and having outer ends extending beyond the ends of the tubes of said second tube system, said supplemental tubular wall means having a continuous spiral groove roll formed therein to compress the bottom of said groove into firm thermal contact with said tubes of the first system without substantial decrease of the wall thickness of said supplement tubular wall means to provide a spiral passage around the tubes of said first tube system for discharge of leaking fluid to atmosphere at opposite ends of said leak-conducting means to prevent contamination of fluids respectively in said first and second tube systems in the event of leakage openings occurring in any of the tubes on the interior of said second tube system.

16/6,K/1 (Item 1 from file: 2)
DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
5994916 INSPEC Abstract Number: B9809-2350D-050, C9809-7410D-113
Title: Technical characteristics of a novel helical - groove traveling-wave tube structure
Publication Date: July 1998
Copyright 1998, IEE
...Abstract: MAFIA. A conceptually novel design comprising a helical thread of the same pitch and inner **diameter** in a cylindrical waveguide also were calculated with the MAFIA code, The helical-groove structure...
...Identifiers: helical - groove traveling-wave tube structure

16/6,K/2 (Item 2 from file: 2)
DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
5244975 INSPEC Abstract Number: A9610-6470F-007
Title: Advanced micro-fin tubes for condensation
Publication Date: June 1996
Copyright 1996, IEE
...Abstract: for new micro-fin geometries applied to the inner surface of 15.88 mm outside **diameter** tubes. The purpose of the work was to develop internal geometries having higher condensation coefficients than existing single-groove micro-fin designs. The new geometries include both single-helix and cross-grooved surfaces. The single-groove geometries have 74-80 internal fins, 0.35 mm fin height, and 30 degrees fin included angle. The cross-groove geometries are formed by applying a second set of grooves at the same helix angle, but opposite angular direction as the first set. Data are provided for varying second groove depths. Data are reported for condensation at 24.0 degrees C in a 2.44...
... 1/ mass flow rate. The data show that the heat transfer coefficient increases with the helix angle, up to the maximum 27 degrees tested. The cross grooved tubes provided higher condensation coefficients than the single-helix geometries. The performance of the new geometries are compared to a single-helix geometry (MX-15) similar to existing micro-fin tubes. The best cross-grooved tube provided 27% higher condensation coefficient than the single-helix tube. The pressure drop is 6% higher than in the single helix tube.

16/6,K/3 (Item 3 from file: 2)
DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
5244974 INSPEC Abstract Number: A9610-4760-011
Title: Advanced micro-fin tubes for evaporation
Publication Date: June 1996

Copyright 1996, IEE

...Abstract: for new micro-fin geometries applied to the inner surface of 15.85 mm outside **diameter** tubes. The purpose of the work was to develop internal geometries having higher evaporation coefficients than existing single-groove micro-fin designs. The new geometries include both single-helix and cross-grooved surfaces. The single-groove geometries have 74-80 internal fins, 0.35 mm fin height; and 30 degrees fin included angle. The cross-groove geometries are formed by applying a second set of grooves at the same helix angle, but opposite angular direction as the first set. Data are provided for varying second groove depths. Data are reported for evaporation at 2.2 degrees C in a 2.44...

... 0.20 and 0.80, respectively. The evaporation coefficient reaches a maximum at 20 degrees helix angle and then decreases for higher helix angle. The highest performance was provided by a cross-grooved tube having 20 degrees helix angle. Its evaporation coefficient is 23% higher than an existing 75 groove, single-helix tube. The pressure drop is 6% higher than in the 75 groove tube. Reduced performance occurs in the cross-grooved tube when the second groove depth exceeds 60% of the depth of the first set of grooves. The series 2 data stimulate complete evaporation with exit superheat in circuit lengths of 7...

16/6,K/4 (Item 4 from file: 2)

DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
4839194 INSPEC Abstract Number: A9502-4725Q-015

Title: Heat exchange enhancement in circular tubes with helical grooves on the outside and corresponding fins on the inside: separate measurements of grooves and fin contributions

Publication Date: 1993

Abstract: Experimental values of the hydraulic resistance and heat transfer coefficients for copper tubes with I.D's of 15 and 25 mm with outside helical grooves and corresponding internal fins (protrusions) are presented. The height of the internal fins varied from...

...0.88 mm, and the spacing between them varied from 9 to 36 mm. The tube length was more than 100 **diameters**. The measurements were made in a double pipe exchanger with a liquid metal-kerosene fluid pair, so as to concentrate the heat transfer...

... on the kerosene side and to be able to measure the separate contributions of the grooves and fins to heat transfer and hydraulic resistance (as a function of the Reynolds number...

16/6,K/5 (Item 5 from file: 2)

DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
02138950 INSPEC Abstract Number: A83113508

Title: Generalization of experimental data of hydraulic friction, inside helically corrugated tubes

Publication Date: 1983

Abstract: The authors have made an analysis of geometrical ratios of helically corrugated tubes on hydraulic friction. A new generally geometric parameter $h/D_{sub e/}$ has been proposed...

... calculating hydraulic friction. Here h is the height of the spiral projections, $D_{sub e/}$ **diameter** of the helical curve lying on the face of the supposed cylinder with the **diameter** $d_{sub e/}$. The offered formulae approximate experimental results of various investigators, error maximum being...

...of Reynold's number from $1 \cdot 10^{sup 4/}$ to $5 \cdot 10^{sup 4/}$ for tubes with the height of helical projections $0.1 < h/d < 0.3$, where d is **diameter** of the

smooth portion within the tube .

16/6,K/6 (Item 6 from file: 2)
DIALOG(R)File 2:(c) 2002 Institution of Electrical Engineers. All rts.reserv.
01495599 INSPEC Abstract Number: B80018595

Title: Experimental investigation on phase constant and cutoff wavelength of a cocoon-section corrugated waveguide (antenna feeders)

Publication Date: Nov. 1979

...Abstract: an experimental investigation on the phase constant and the cutoff wavelength of a cocoon-section corrugated waveguide (CCWG) with a cocoon-cross-section configuration and sinusoidal-wave helical corrugation along the longitudinal axis. The CCWG is widely used for antenna feeder waveguides in 4...

... 2 GHz than the calculated value for a cocoon-section smooth waveguide (CSWG) with a tube **diameter** equivalent to the center **diameter** of corrugated guide-walls. The measured cutoff wavelength is nearly equal to the calculated value for a...

... experimental equation showing the dispersive property of the phase constant is evaluated assuming that the corrugation size is small as compared with the major **diameter** .

...Identifiers: tube **diameter** ;

16/6,K/7 (Item 1 from file: 6)
DIALOG(R)File 6:(c) 2002 NTIS, Intl Cpyrght All Rights Res. All rts.reserv.
0742701 NTIS Accession Number: AD-A062 204/3/XAB

An Experimental Comparison of Enhanced Heat Transfer Condenser Tubing
(Master's thesis)

Sep 78

Ten 15.9 mm (5/8 in.) nominal outside **diameter** geometrically enhanced tubes of different metals were tested to determine their heat transfer and hydrodynamic performance. Results were compared to smooth copper-nickel tubes . Steam at about 21kPa (3 psia) was condensed on the outside surface of each enhanced tube , horizontally mounted in the center of a dummy tube bank. Each tube was cooled on the inside by water at velocities of 2.7 to 7.6...

... the enhanced section was determined from the cooling water pressure drop. Enhanced geometries (utilizing pitch, helix angle and groove depth) were found to improve the corrected overall heat transfer coefficient by as much as 2 times that for smooth tubes . Use of enhanced tubes in place of smooth tubes will permit a decrease in condenser tube surface area from 17 to 53 percent for constant heat loads and constant pumping power...

16/6,K/8 (Item 1 from file: 8)
DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
05347201

Title: Analysis of double wall brazed tube with inner helix groove
Publication Year: 1998

Abstract: The manufacturing method and characteristics of the double wall brazed tube with inner helix groove were given. The effects of the parameters of inner helix groove on the heat transfer efficiency were investigated. The influence of inner helix groove must be considered when the strip width, sizing roll pass, mandrel **diameter** and sizing force are to be determined. (Edited author abstract) 5 Refs.

16/6,K/9 (Item 2 from file: 8)

DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
03837794

Title: Flexible metal hoses with screw-shaped corrugation and methods of evaluating their carrier capacity

Publication Year: 1994

Abstract: The majority of modern machines and mechanisms contain flexible pipe -lines which, unlike stiff pipe -lines facilitate access to joined units, permit the mutual shift of plant items, damp vibration, and accommodate temperature strains. Flexible pipe -line can have metal, fluoroplastic, or rubber flexible parts. The best indexes of carrier capacity...

...from mechanical injury, excessive tension, and partial unloading from internal pressure. (2) The screw-shaped corrugation from (the number of entries) has the greatest effect on the shell with the smallest **diameter** (PITT10) and the greatest screw helix angle (up to 12 degrees). The transition from ring-shaped to one-entry screw-shaped corrugation reduces the durability by a factor of four. At the same time for the shells...
...on durability or torque in the hose sealing are not imposed, substituting the ring-shaped corrugation shell with a cheaper shell with one-entry screw-shaped corrugation can be acceptable. (Author abstract) 8 Refs.

16/6,K/10 (Item 3 from file: 8)

DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
02714643

Title: Flow establishment in helical corrugated pipe .

Publication Year: 1988

...Abstract: were conducted at the Hydraulics Laboratory, Department of Civil Engineering, University of Saskatchewan. The model pipes were 107 mm inside **diameter** and 2.13 m long. Standard corrugations were simulated and helix angles of 61.0 and 71.4 degree were tested. It was found that about 12 **diameters** of pipe length were required to obtain fully established flow, and a value for the development had...

Identifiers: FLOW ESTABLISHMENT; HELICAL CORRUGATED PIPE; HEAD LOSSES

16/6,K/11 (Item 4 from file: 8)

DIALOG(R)File 8:(c) 2002 Engineering Info. Inc. All rts. reserv.
00128000

Title: Effect of helix angle on flow in corrugatee pipes .

Publication Year: 1970

Abstract: New measurements of the Darcy friction factor in helical corrugated pipes are combined with earlier measurements to show general trends. These indicate that for a given pipe **diameter** , friction factor decreases as helix angle decreases and that for a given helix angle, friction factor decreases as pipe **diameter** increases. The idea is advanced that the decrease in friction factor is associated with reduced...

16/6,K/13 (Item 2 from file: 25)

DIALOG(R)File 25:(c) 2002 TWI Ltd. All rts. reserv.
00077529 042383

THE WELLMANTEL PROCESS AND ITS APPLICATION.

PUBLICATION DATE: 19730000

...PROCESS WAS DEVELOPED TO MAKE CABLE SHEATHS BY LONGITUDINALLY TIG WELDING THIN METAL STRIP INTO TUBE WHILE THE CABLE CORE WAS BEING INSERTED, WELDING BEING FOLLOWED BY THE PRODUCTION OF ANNULAR OR HELICAL CORRUGATIONS IN THE SHEATH. SHEATHING METALS INCLUDE COPPER AND ITS ALLOYS, AND OUTSIDE **DIAMETERS** FROM 6-300 MM ARE PRODUCED. A SPECIAL

CORROSION-RESISTANT COATING IS USED. FURTHER DEVELOPMENTS...
...LINE FOR TRANSPORTING ENVIRONMENTALLY HARMFUL LIQUIDS, CONSTRUCTED OF AN
INNER COPPER AND AN OUTER STEEL TUBE AND INCORPORATING AN ALARM SYSTEM TO
WARN OF LEAKAGE. IN GERMAN IN: DRAHT, VOL. 25...

16/6,K/14 (Item 1 from file: 34)
DIALOG(R)File 34:(c) 2002 Inst for Sci Info. All rts. reserv.
04833851 Genuine Article#: UL148 Number of References: 31
Title: WATER TRANSPORT IN XYLEM CONDUITS WITH RING THICKENINGS
Abstract: Helical or annular wall thickenings are not only present in
protoxylem, but may also be a...
...The frequency of their occurrence tends to be a function of climatic
factors and conduit **diameter**, In order to obtain a functional
explanation for these structures, the hydrodynamic behaviour of xylem
...
...presented in detail, The calculations show that the developing pressure
gradient of the structures with corrugated walls is in each case
lower than that of a smooth pipe with a **diameter** corresponding to
the distance between two opposite thickenings, Furthermore, complex
flow patterns with circulation zones...

16/6,K/15 (Item 1 from file: 63)
DIALOG(R)File 63:(c) fmt only 2002 Dialog Corp. All rts. reserv.
00215821 DA
TITLE: COMPARATIVE STUDIES ON CORRUGATED METAL CULVERT PIPES
PUBLICATION DATE: 19650200
...ABSTRACT: OF A THREE-PHASE PROGRAM OF RESEARCH INTO THE SOIL-STRUCTURE
INTERACTION ATTAINED IN CULVERT PIPE STRUCTURES. THE OBJECTIVES OF
PHASE I WERE TO /1/ DEVELOP METHODS OF TEST FOR SIGNIFICANT STRUCTURAL
PROPERTIES OF CORRUGATED METAL CULVERT SECTIONS; /2/ TO ASCERTAIN THE
CONTROLLING GEOMETRIC AND MECHANICAL PARAMETERS OF SUCH SECTIONS...
...AND EVALUATE THE STRUCTURAL PERFORMANCE OF TYPICAL METAL CULVERT
SECTIONS AVAILABLE. THREE TYPES OF FLEXIBLE PIPE WERE INVESTIGATED'
SPIRAL CORRUGATED METAL PIPE, RIVETED CORRUGATED METAL PIPE AND
SPOT-WELDED CORRUGATED METAL PIPE. TESTS PERFORMED' WALL STRENGTH
TESTS, TWO-EDGE BEARING TESTS, SHORT COLUMN TESTS, AND BEAM TESTS. THE
FOLLOWING CONCLUSIONS WERE DRAWN BASED ON WALL STRENGTH' SPIRAL PIPES
IN GENERAL DEVELOPED SUFFICIENT RESISTANCE IN THE SEAMS TO CAUSE
FAILURE BY WALL BUCKLING. THE HELIX ANGLE OF THE SPIRAL PIPE DID
NOT HAVE ANY SIGNIFICANT EFFECT ON ULTIMATE LOAD AT ANGLES OF 8 DEGREES
OR...
...THAN 8 DEGREES THERE WAS A DEFINITE DECREASE IN ULTIMATE LOAD PER FOOT
THE SPIRAL PIPE WITH THE 1/2- BY 2- INCH CORRUGATION WAS ABOUT 37
PERCENT STRONGER THAN THE WELDED WHILE THE 1/2- BY 2-2/3-INCH
CORRUGATION WAS 10 PERCENT WEAKER THAN THE WELDED PIPE OF THE SAME
GAGE THE RIVETED PIPE SPECIMENS WERE APPROXIMATELY 15 PERCENT WEAKER
THAN THE WELDED SPECIMENS OF THE SAME GAGE AND **DIAMETER**. THE
FOLLOWING ARE THE CONCLUSIONS FROM THE TWO-EDGE BEARING TEST ' THE
EXPERIMENTAL VALUES OF E1 FELL APPROXIMATELY 14 PERCENT BELOW THE
ANALYTICAL VALUES; THE RIVETED AND WELDED PIPE ARE PRACTICALLY EQUAL
THE EXPERIMENTAL E1 OF THE SPIRAL PIPE WITH 1/2- BY 2-INCH
CORRUGATION WAS ABOUT 25 PERCENT BELOW THE COMPARABLE RIVETED OR
WELDED PIPES THE SPIRAL PIPE WITH THE 1/2- BY 2-2/3-INCH
CORRUGATION WAS ABOUT 31 PERCENT BELOW THE RIVETED OR WELDED PIPES
THE VARIATION OF THE SPIRAL PIPE VALUE OF E1 FROM THE RIVETED AND
WELDED PIPE VALUES DECREASED AS THE **DIAMETER** DECREASED. THE

PRINCIPAL CONCLUSION FROM THE BEAM TESTS IS' THE WELDED, RIVETED AND 2-2/3 PITCH SPIRAL PIPE SPECIMENS WERE, FOR ALL PRACTICAL PURPOSES, EQUAL. THE SPIRAL PIPE WITH THE 1/2- BY 2-INCH CORRUGATION WAS APPROXIMATELY 25 PERCENT INFERIOR TO THE OTHER TYPES OF PIPE . /BPR/

16/6,K/16 (Item 2 from file: 63)
DIALOG(R)File 63:(c) fmt only 2002 Dialog Corp. All rts. reserv.
00204320 DA
TITLE: EFFECT OF HELIX ANGLE ON FLOW IN CORRUGATED PIPES
PUBLICATION DATE: 19701100
ABSTRACT: NEW MEASUREMENTS OF THE DARCY FRICTION IN HELICAL CORRUGATED PIPES ARE COMBINED WITH EARLIER MEASUREMENTS TO SHOW GENERAL TRENDS. THESE INDICATE THAT FOR A GIVEN PIPE **DIAMETER** , FRICTION FACTOR DECREASES AS HELIX ANGLE DECREASES AND THAT FOR A GIVEN HELIX ANGLE, FRICTION FACTOR DECREASES AS PIPE **DIAMETER** INCREASES. SOME ANALYSES OF VELOCITY PROFILE MEASUREMENTS ARE ALSO PRESENTED. THE IDEA IS ADVANCED THAT...

16/6,K/17 (Item 1 from file: 65)
DIALOG(R)File 65:(c) 2002 BLDSC all rts. reserv. All rts. reserv.
00361102 INSIDE CONFERENCE ITEM ID: CN003423840
Heat Transfer and Pressure Drop During Evaporation and Condensation of Refrigerant-22 in 7.5 mm and 10 mm **Diameter** Axial and Helical Grooved Tubes
CONFERENCE: Heat transfer-29th National conference (199308)
...Drop During Evaporation and Condensation of Refrigerant-22 in 7.5 mm and 10 mm **Diameter** Axial and Helical Grooved Tubes

16/6,K/18 (Item 1 from file: 96)
DIALOG(R)File 96:(c) 2002 Elsevier Science Ltd. All rts. reserv.
00192119 FLUIDEX NO: 0200085 SUBFILE: PL
Flow establishment in helical pipe.
In: Advancements In Aerodynamics, Fluid Mechanics, and Hydraulics, Proc. Specialty Conf., (Minneapolis, U.S.A.: Jun. 3-6, 1986), R.E.A. Arndt; H.G. Stefan; C. Farell; S.M. Peterson, (eds.), New York, U.S.A., Am. Soc. Civ. Engrs., 1986, Session 4B, p.245-253. (ISBN 0-87262-539-7), 1986
This paper considers the flow establishment in a helical lock seam corrugated pipe . Experiments to determine the development head loss were conducted at the Hydraulics Laboratory, Department of Civil Engineering, University of Saskatchewan. The model pipes were four inches inside **diameter** and seven feet long. Standard corrugations were simulated and helix angles of 61.0 DEGREE and 71.4 DEGREE were tested. It was found that about twelve **diameters** of pipe length were required to obtain fully established flow and a value for the development head...

16/6,K/19 (Item 2 from file: 96)
DIALOG(R)File 96:(c) 2002 Elsevier Science Ltd. All rts. reserv.
00147996 FLUIDEX NO: 0154706 SUBFILE: X
The effect of vapour shear and condensate drainage in condensers using roped tubes.
Desalination, vol.45, no.1-3, May 1983, p.135-142., 1983
...performance of a condensing heat exchanger can be improved by using roped or spirally indented tubes . Most of the published work refers to experiments carried out on single tubes in closely controlled laboratory experiments. If such tubes are to be used in practical situations the

designer must know how they will perform in tube bundles. One of the main problems in condensers is the effect of condensate drainage (inundation... ..the performance of that condenser. A series of experiments were carried out in three different tube bundles of 21 tubes in order to investigate the above phenomenon. One of the bundles was of plain tubes the other two were of roped tubes of the same **diameter**, groove pitch and groove depth but of differing helix angle. These values were 11 mm, 0.2 mm, and 6.4 mm respectively. The tubes were all 0.69 m long. The main experimental variables were cooling water velocity and... ..the vapour in the condenser has a significant effect on the heat transfer performance of tubes in the bundle. Experiments with the roped tubes show that their performance is not as adversely affected by condensate drainage as is the plain tube bundle. (A)

16/6,K/20 (Item 1 from file: 103)
DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
03620066 CANM-94-0E7855; EDB-94-036032
Title: Field tests of the vibration characteristics of two types of OPGW
[optical fibre ground wire]
Title: Canadian Electrical Association engineering and operating conference
Original Title: Conference du genie et de l'operation de l'Association
Electrique du Canada Comptes rendus
Conference title: Canadian Electrical Association engineering and operating
conference
Original Conference Title: Conference du genie et de l'operation de
l'Association Electrique du Canada
Publication Date: 1993
...Abstract: of vibration tests on two structurally different optical fibre
ground wire (OPGW) conductors of similar **diameter**, tested on a full
scale basis under comparable aeolian exposure. One cable (A) had one
layer of Alumoweld wires, a thick aluminum tube and an optical cable
composed of 8 monomode fibres around a small central strength member...
...wires of different gages surrounding the central optical unit made up of
a thinner aluminum tube but enclosing a solid aluminum grooved
spacer. Two of the three helical grooves contain 6 monomode fibres
each surrounding a central strength member. Both cables were strung at
...

16/6,K/21 (Item 2 from file: 103)
DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
03292913 NOV-91-040116; EDB-92-055670
Title: Drill pipe with helical ridge for drilling highly angulated
wells
Publication Date: 27 Aug 1991
Title: Drill pipe with helical ridge for drilling highly angulated
wells
...Abstract: a bit which method employs drilling fluid. The improvement
comprises: employing a length of drill pipe in the highly angulated
drill string which has a helical ridge disposed thereabout, wherein
the flight of the helical ridge is wound in the same direction as
the rotation of the drill string such as...
...direction from the bit to the surface upon rotation, and wherein the
height of the helical ridge above the circumferential surface of
the length of the drill pipe is 1 to 15 percent of the **diameter** of
the drill pipe .

16/6,K/22 (Item 3 from file: 103)

DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
03118152 CANM-91-008257; EDB-91-055585

Title: Electro-welding sleeve fabrication method, device for implementing
it and sleeves obtained by the method

Publication Date: 9 Dec 1990

...Abstract: molded to a cylindrical shape delimited by an outside surface
and an inside surface. A helical groove is formed in one of these 2
surfaces of the sleeve. A wire is placed in the groove, and the
plastics material heated by means of the wire is smoothed so as to
cover the wire totally and close the groove. The electric resistance
welding sleeve obtained in this way is particularly intended to be used
either without overmolding it as an ordinary sleeve, particularly for
welding water pipes, or after overmolding it, as an electric
resistance welding connector, particularly for gas pipes. The method
of the invention also makes it possible to fabricate electric
resistance welding sleeves of varying **diameter**, for example sleeves
for joining two pipes of different **diameters**. The device for
implementing the method in accordance with the invention comprises a
motor-driven...

16/6,K/23 (Item 4 from file: 103)

DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
03113038 EDB-91-050470; ERA-16-014179

Title: Laboratory furnace design for programmed temperature pyrolysis of
fossil fuels

Title: 1989 Eastern oil shale symposium: Proceedings

Conference title: 1989 Eastern oil shale symposium

Publication Date: 1989

...Abstract: so that it can be used with various controllers. The authors
developed a vermiculite-insulated tube furnace heated by helically
wound resistance wire positioned within helical grooves on the
surface of a ceramic cylinder. This in turn surrounds a double slotted
stainless steel cylindrical liner. For uniform heating, the pitch of
the helix is shorter over the two end portions of the ceramic
cylinder. The furnace can be designed to accommodate either large- or
small- **diameter** reactors. It provides uniform temperature, offers an
extremely precise programmed heating capability, features rapid cool...

16/6,K/24 (Item 5 from file: 103)

DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
00863836 EDB-82-038676

Title: Method of manufacturing a radiant energy collecting or emitting
element (Patent)

Publication Date: 17 Nov 1981

...Abstract: cylindrical bore through which a tool comprising a mandrel
having lands is drawn to form helical grooves. A tube formed of a
ductile metal dissimilar to the plate metal is placed within the bore
and a second tool is then drawn through the tube. The second tool has
an outer **diameter** greater than the inner **diameter** of the tube so
that the tube is radially expanded outwardly into intimate surface
contact with the bore. During expansion the material of the tube cold
flows into the grooves to form lands which lock the tube against
displacement relative to the plate.

16/6,K/25 (Item 6 from file: 103)

DIALOG(R)File 103:(c) 2002 Contains copyrighted material. All rts. reserv.
00692645 ERA-06-003637; EDB-81-000893

Title: Radiant energy collecting or emitting element and method and tool
for manufacture thereof (Patent)

Publication Date: 19 Aug 1980

...Abstract: cylindrical bore through which a tool comprising a mandrel having lands is drawn to form helical grooves. A tube formed of a ductile metal dissimilar to the plate metal is placed within the bore and a second tool is then drawn through the tube. The second tool has an outer **diameter** greater than the inner **diameter** of the tube so that the tube is radially expanded outwardly into intimate surface contact with the bore. During expansion the material of the tube cold flows into the grooves to form lands which lock the tube against displacement relative to the plate.

16/6,K/26 (Item 1 from file: 35)

DIALOG(R)File 35:(c) 2002 ProQuest Info&Learning. All rts. reserv.
01443466 ORDER NO: AADAA-I1375054

PRESSURE DROP AND HEAT TRANSFER MEASUREMENTS OF TURBULENT INTERNAL FLOW IN GROOVED TUBES

Year: 1995

...experimental heat transfer and pressure drop study for water flow in circular smooth and internally grooved tubes. Copper tubes of 9.5 mm and 7.0 mm outer **diameters** are used. Grooved tubes have spiral grooves with 25° helix angle, 0.12 mm groove depth, 0.45 mm pitch in 9.5 mm tubes; 18° helix angle, 0.15 mm groove depth, 0.32 mm pitch in 7.0 mm tubes. Measured friction factor and heat transfer data are compared with data in literature.

Pressure drop of turbulent water flow in internally grooved multi-pass heat exchangers was documented. Copper tubes of 10.6 mm and 7.8 mm outer **diameters** are involved. Spiral grooves have 17.2° helix angle, 1.87 mm pitch in 10.6 mm tubes; 25° helix angle, 0.88 mm pitch in 7.8 mm tubes. Measured friction factor data are compared with pressure drop data of 9.5 mm and 7.0 mm single grooved copper tubes.

16/6,K/27 (Item 2 from file: 35)

DIALOG(R)File 35:(c) 2002 ProQuest Info&Learning. All rts. reserv.
738600 ORDER NO: AAD81-04593

ULTRASTRUCTURAL AND EXPERIMENTAL INVESTIGATIONS OF THE EUGLENOID FLAGELLATE, PERANEMA TRICHOPHORUM (EHRENBERG) STEIN, WITH SPECIAL REFERENCE TO FLAGELLA, MUCOCYSTS AND FEEDING APPARATUS

Year: 1980

...ball of mucilaginous material or may themselves be ejected from the cell through the pellicular grooves. Ejected mucocysts show a uniform structure consisting of an inner tube with helical striations, an outer tube with a diamond-shaped pattern, and a dense middle band. Fine fibrils 8-9 nm in **diameter** emanate from mucocyst tips.

The ingestion or feeding apparatus consists of a prominent rodorgan, a...

16/6,K/28 (Item 1 from file: 315)

DIALOG(R)File 315:(c) 2002 DECHEMA. All rts. reserv.
393373

Advanced micro-fin tubes for evaporation.

PUBLICATION DATE: 1996 (960000)

...ABSTRACT: for new micro-fin geometries applied to the inner surface of 15.88 mm outside **diameter** tubes. New internal geometries were developed having higher evaporation coefficients than existing single-groove and micro-fin designs. The highest performance was provided by a cross-grooved tube with a 20 degree helix angle. Its evaporation coefficient is 23% higher than an existing 75 groove, single-helix tube. The pressure drop is 6% higher than in the 75 groove tube. (Newbold) ...

16/7/12 (Item 1 from file: 25)

DIALOG(R)File 25:Weldasearch

(c) 2002 TWI Ltd. All rts. reserv.

00130446 109987

Tests on welded self-compensating pipes (Ispytaniya svarnykh samokompensir-...).

LOS' A O

Avtomaticheskaya Svarka, no.4. Apr.1981. pp.73-74. 1 fig.

AVTOMATICHESKAYA SVARKA

PUBLICATION DATE: 19810000 DOCUMENT TYPE: Journal

LANGUAGE: Russian RECORD TYPE: Abstract

Axial compression tests were conducted on helically welded pipe sections of **diameter** 426mm, with helical corrugations of height 26mm, made from 500mm wide strip of type 10 steel, 5mm thick. The loading simulated the effects of heating and internal overpressure. The pipes are used in conveying liquids at up to 90 deg.C and 3.4MPa pressure.

[Not translated in Automatic Welding]

16/7/29 (Item 1 from file: 354)

DIALOG(R)File 354:Ei EnCompassLit(TM)

(c) 2002 Engineering Info., Inc. All rts. reserv.

0226816 EnCompassLit Document No.: 2602400

HEAT TRANSFER CHARACTERISTICS OF CORRUGATED TUBES IN STEAM CONDENSING APPLICATIONS

Author: YOUNG E H; WITHERS J G; LAMPERT W B

Corporate Source: UNIV. MICH. ; UOP WOLVERINE DIV.

Source: 15TH AICHE NATL. HEAT TRANSFER CONF. (SAN FRANC. AUG. 1975) AICHE SYMP. SER. V74 N.174 15-24 (1978)

Language: English

Document Type: MEETING PAPER

Publication Date: 780000

Ei EnCompassLit Bulletin Headings: HEAT TRANSFER AND FLUID FLOW; PETROLEUM REFINING AND PETROCHEM

Abstract:

Heat Transfer Characteristics of Corrugated Tubes in Steam Condensing Applications. Data collected on four single-helix corrugated tubes (copper or 90-10 cupronickel) with steam condensing at 100.degree. and 212.degree.F yielded equations applicable to the design of horizontal tube water-cooled steam condensers operating in a filmwise condensing mode. In a design study at equal pressure drop and the same wall thickness, the two tubes having the lowest severity (ridge height-helix pitch-ID) factors were compared with a reference plain tube; one of the corrugated tubes showed a savings of 11,105 ft of tubing and a significant reduction in the number of tubes (2482 vs. 2935 for plain tubes). Tables, graphs, photograph, and diagrams. See also Abstract No. 18-2548

16/7/30 (Item 2 from file: 354)
DIALOG(R)File 354:Ei EnCompassLit(TM)
(c) 2002 Engineering Info., Inc. All rts. reserv.
0156957 EnCompassLit Document No.: 2109991
THE HEAT-TRANSFER CHARACTERISTICS OF HELICAL - CORRUGATED TUBES FOR
INTUBE BOILING OF REFRIGERANT R-12
Author: HABDAS E P; WITHERS J G
Corporate Source: UOP WOLVERINE TUBE DIV
Source: AIChE SYMP SER V70 N.138 98-106 (1974)
Language: English
Document Type: MEETING PAPER
Publication Date: 740000
Ei EnCompassLit Bulletin Headings: HALOGEN COMPOUNDS; HEAT TRANSFER AND
FLUID FLOW; PETROLEUM REFINING AND PETROCHEM

File 2:INSPEC 1969-2002/Oct W4
File 6:NTIS 1964-2002/Oct W3
File 8:Ei Compendex(R) 1970-2002/Oct W3
File 25:Weldasearch 1966-2002/May
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Oct W4
File 63:Transport Res(TRIS) 1970-2002/Sep
File 65:Inside Conferences 1993-2002/Oct W4
File 94:JICST-EPlus 1985-2002/Aug W4
File 96:FLUIDEX 1972-2002/Oct
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Sep
File 103:Energy SciTec 1974-2002/Oct B1
File 144:Pascal 1973-2002/Oct W4
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 35:Dissertation Abs Online 1861-2002/Oct
File 118:ICONDA-Intl Construction 1976-2002/Nov
File 315:ChemEng & Biotech Abs 1970-2002/Sep
File 354:Ei EnCompassLit(TM) 1965-2002/Oct W4
File 19:Chem.Industry Notes 1974-2002/ISS 200244
File 30:AsiaPacific 1985-2002/Sep 26
File 583:Gale Group Globalbase(TM) 1986-2002/Oct 26

Set	Items	Description
S1	1143803	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	7382	SPIRAL?(3N) (WIND??? OR WOUND OR FORM???)
S3	276140	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?
S4	687818	DIAMETER?? OR DIAMETRE??
S5	17	S1 AND S2 AND S3 AND S4
S6	14	RD (unique items)
S7	3	S6/2002 OR S6/2001 OR S6/2000 OR S6/1999
S8	11	S6 NOT S7
S9	207467	HELIC??? OR HELIX
S10	971	HELIXES
S11	68	S1 AND S9:S10 AND S3 AND S4
S12	68	S11 NOT S5
S13	59	S1(S)S9:S10(S)S3 AND S4
S14	34	RD (unique items)
S15	4	S14/2002 OR S14/2001 OR S14/2000 OR S14/1999
S16	30	S14 NOT S15

9/6,K/1 (Item 1 from file: 95)

DIALOG(R)File 95:(c) 2002 FIZ TECHNIK. All rts. reserv.
01280624 W99026793400

Titel chinesisch

(Analyse eines doppelwandigen geloeteten Rohrs mit inneren spiralförmigen Rillen)

(Analysis of double wall brazed tube with inner helix groove)1998

(Analysis of double wall brazed tube with inner helix groove)

ABSTRACT:

In this article the manufacturing method and characteristics of the double wall brazed tube with inner helix groove are given. The effect of the parameters of inner helix groove on the heat transfer efficiency is investigated. The effect of inner helix groove must be considered when strip width, sizing roll pass, mandrel **diameter** and sizing force are to be determined.

9/6,K/2 (Item 2 from file: 95)

DIALOG(R)File 95:(c) 2002 FIZ TECHNIK. All rts. reserv.
01256151 N98110766700

Application of micro-spiral-corrugated welded tubes with optical fibers
1998

ABSTRACT:

...fibers are applied in aerial cables. An improved cable design by a reduction of the **diameter** of more than 20 percent can be obtained by a new micro corrugation . Tube **diameters** of 3 mm to 6 mm are provided with this micro corrugation and the thin metal sheaths are about 0.1 to 0.15 mm. This mechanical forming process preferably in spiral corrugation improves the transverse stability by a factor of 3 to 5. With this tube design, compact optical cables with 200 fibers and more can be produced.

9/6,K/3 (Item 3 from file: 95)

DIALOG(R)File 95:(c) 2002 FIZ TECHNIK. All rts. reserv.
00619369 M92088285616

Method and apparatus for drilling a highly angulated wellbore
(Verfahren und Vorrichtung zum Bohren eines sehr abgelenkten Bohrloches)
1991

ABSTRACT:.

...with a bit which method employs drilling fluid; characterised by: employing a length of drill pipe in the highly angulated drill string which has a helical ridge disposed thereabout, wherein the flight of the helical ridge is wound in the same direction as the rotation of the drill string such as...

...direction from the bit to the surface upon rotation, and wherein the height of the helical ridge above the length of the drill pipe is 1 to 15 percent of the **diameter** of the drill pipe . (No obligations as to scope of patent protection and application.)

9/6,K/4 (Item 1 from file: 9)

DIALOG(R)File 9:(c) 2002 Resp. DB Svcs. All rts. reserv.
01657890 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Making it big in Japan

November 14, 1996

WORD COUNT: 2563

TEXT:

...uses of paperboard were on show. Matsushita Electric won a Japan Star award with a corrugated board transit package which uses spirally

wound composite paper tubes to provide vertical compression strength for its air conditioner packs. Supported by 3- sided trays and a moulded pulpboard inner base, it reduces corrugated board use compared with previous cases with fitments. What would be the fourth sidewall is...

...a sealed-in, v-folded inner transverse web. The web has a set of 5mm **diameter** holes punched along its length. When the pouch is opened, powder can be sprinkled on...

9/6,K/5 (Item 1 from file: 15)

DIALOG(R)File 15:(c) 2002 ProQuest Info&Learning. All rts. reserv.
00752813 94-02205

Enhanced surface condensers improve heat rates

Jul 1993 LENGTH: 3 Pages

WORD COUNT: 2560

...TEXT: be fabricated using all commonly used tubing materials including titanium and stainless steel.

A plain tube is embossed with an external roller that creates internal, helical ridges or disruptions. The wall thickness is not altered and the tube ends, as well as any desired portion of the tube length, can remain unaltered. The outside surface area is essentially the same as the original plain tube.

Increased turbulence from the ridges or disruptions improves the inside heat transfer, and condensate film...

...inspection of enhanced tubes is more difficult and less accurate because of the variable inside **diameter**. However, an experienced technician can overcome these problems.

COST EFFICIENCIES

Table 2 shows the factors...

9/6,K/7 (Item 1 from file: 148)

DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.

10458751 SUPPLIER NUMBER: 21127387 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Extrusion systems. (1998/1999 Manufacturing Handbook & Buyers' Guide) (Buyers Guide)

August, 1998

WORD COUNT: 10039 LINE COUNT: 00860

... machinery and equipment for multilayer foam-core pipe from 2- through 8-in. diam.

Unicor corrugators produce tubing from 0.33- to 31.50-in. diam. of PVC, PE, PP, PFA, nylon, etc. Spiral - winding system patented by A.G. Petzetakis in Greece produces large-bore pipe up to 120-in. diam.

AKRON EXTRUDERS, INC.

Single-screw extruders from 3/4 in...to 36-in I.D.) pipe for electrical conduit, drainage, sewers, culverts. Also large-diam. spiral - wound pipe systems from 15- to over 60-in. I.D., as well as aftercoolers, perforators, slitters, cutoffs and high-speed winders for small-diam. tubing.

Offers extruders with corrugating lines. Also in-line cuff systems for single-wall and double...with segmented air rings, high-intensity cavity-mixing sections, gauge measurement systems, and automatic bubble-**diameter** control. Max. cooling capacity is 30 lb/in. of die circumference. Bag machines include three...coilers, single and dual automatic take-ups, take-up stands, and cabling machinery. Options include **diameter**, capacitance, temperature, elongation and synchronization control systems.

MPL 32 system is for pipe and tubing...pelletizing and compounding lines to complete post-industrial and post-consumer plastic reclamation

facilities. Dual- **diameter** extrusion systems for low-bulk-density reclaim applications feature minimal operator interface.

Equipment includes extruders...

9/6,K/8 (Item 2 from file: 148)
DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
09187068 SUPPLIER NUMBER: 18996241 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Making it big in Japan. (Industry Overview)
Nov 14, 1996

WORD COUNT: 2742 LINE COUNT: 00217

... uses of paperboard were on show. Matsushita Electric won a Japan Star award with a corrugated board transit package which uses spirally wound composite paper tubes to provide vertical compression strength for its air conditioner packs. Supported by 3-sided trays and a moulded pulpboard inner base, it reduces corrugated board use compared with previous cases with fitments. What would be the fourth sidewall is...
...a sealed-in, v-folded inner transverse web. The web has a set of 5mm **diameter** holes punched along its length. When the pouch is opened, powder can be sprinkled on...

9/6,K/12 (Item 6 from file: 148)
DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
06812599 SUPPLIER NUMBER: 15500025 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Sears Tower coil replacement: a tall order. (replacement of chilled water coils) (includes related article)

Dec, 1993

WORD COUNT: 2358 LINE COUNT: 00186

... to HFC change-out losses.

The design

The spiral fin being replaced featured a closer tube -face center distance than the newer corrugated -surface plate-fin design. Some redesign of the coil's top and bottom baffles (giving...
...while of secondary importance to the coil's air side, was reasonably matched to the former spiral. Employing three differently authored 5/8 in. tube CW computer programs, two of which are ARI certified, we made matches. Numerous computer runs...to 12 ft long tubes much like cord wood. External to the chambers, the large **diameter** CW supply and return header risers were cut, removed, and replaced with new welded Schedule...

9/6,K/13 (Item 7 from file: 148)
DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
06121481 SUPPLIER NUMBER: 12674361 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Extrusion systems: product lines reviewed. (plastics machinery) (Buyers Guide)

July 15, 1992

WORD COUNT: 8198 LINE COUNT: 00680

... or horizontal format and are A.I.M. INTERNATIONAL INC.

Offers a full line of corrugators capable of producing a tubing from 0.33- to 31.50-in. diam. out of PVC, PE, PP, PA, PFA...

...quality product along with maximum output rates. Also offered is equipment to produce large-bore pipe out of PVC, PE, PP, etc., up to 120-in. diam. through a spiral winding system patented by A.G.

Petzetakis.

Company can offer a complete line of machinery and...

...2-, 2- and 2 1/2-in. diam.) and also manufactures custom-designed units with **diameters** up to 8 in. All models have bimetallic-lined barrels with

up to 30:1...

...dies for pipe, tubing or pelletizing.

ALPHA MARATHON MFG. INC.

Manufactures single-screw extruders in **diameters** from 1 to 6 in., and specializes in blown film applications. Extruders feature air- or...
...co-extrusion of HDPE with LDPE and LLDPE, EVA, EVOH, ionomer and Surylin resins. Screw **diameters** range from 1.5 to 3.5 in.; dies and air rings measure 3 to...

...with segmented air rings, high-intensity cavity-mixing sections, gauge measurement systems, and automatic bubble **diameter** control systems. The maximum cooling capacity with HMW-HDPE is 28 lb/in. of die...80, 100, and 130 are twin-screw extruders with L/D ratio of 24:1. **Diameters** range from 1/2 in. to 36 in., and outputs from 250 to 2400 lb...

...MACHINES, INC./HARTIG DIV.

Supplies standard and custom designed single-screw extruders ranging in screw **diameter** from 3/4- to 15-in. and in L/D ratios depending upon application requirements...

...compounding/pelletizing extruders with melt-feed, cold-feed and batch-feed designs are offered in **diameters** up to 20 in. Output rates extend to over 60,000 lb/hr.

STEWART BOLLING...German and Austrian makes.

A brand-new Apex line of single-screw extruders comes in **diameters** of 2 1/2, 3 1/2, 4 1/2 and 6 in. with standard...

...line slitting, automatic web transfer and handling, web widths up to 160 in., and roll **diameters** up to 60 in. Turnkey, custom-engineered film extrusion systems and line components are also...in. I.D. of corrugated pipe, including systems for dual-wall corrugated pipe and large- **diameter** spiral - wound pipe from 15-in. to over 66-in. diam. Company also builds after-coolers, perforators, slitters, cut-offs and high-speed winders for small-diam. tubing, and offers a complete line of extruders with its corrugators.

New products include rib pipe systems for underground electrical utility ducting and sanitary sewer pipe...6-in. diam. from 15:1 to 30:1 L/D.

* Lighter-duty extruders in **diameters** of 3/4, 1, 1 1/4, 1 1/2, and 2 in., and up...extrusion systems for tubing or profile. Patented Tubetrol system controls both the outside and inside **diameter** of tubing or pipe of any size.

HITACHI ZOZEN TRADING & MFG.

Offers two lines of...

...ratio is easily adjustable. Screws are driven in either a corotating or counterrotating direction. Screw **diameters** from 29 to 125 mm are available.

INSTAMELT SYSTEMS

Manufactures a unique "screwless" extruder with...

...sizes range from 40- to 500-mm diam. Internal bubble cooling is available on die **diameters** of 120-500 mm. Take-offs can be arranged in a stationary or oscillating design...and high-performance screws.

Company supplies custom reclaim extruders up to 8 in. using dual-**diameter** extruders and/or hopper crammers, depending on the feed material. Both new systems and retrofit...

...single and dual automatic take-ups, take-up stands, and cabling machinery. Line options include **diameter**, capacitance, temperature, elongation and synchronization control systems.

The MPL 32 system is designed for extrusion...

9/6,K/14 (Item 8 from file: 148)
DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
05541407 SUPPLIER NUMBER: 11594133 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Contracting ring gage pinpoints dimensions of hubs and grooves. (Products
for Profit)
Nov 15, 1991
WORD COUNT: 4173 LINE COUNT: 00315
TEXT:

...by approaching a workpiece from its end face, has been designed specifically to measure external **diameters** and o.d.'s that are not readily accessible by the conventional snap lower method...
...electronic recording system. Also available is an expanding plug gage which accurately measures spherical bore **diameters**. When this gage is expanded, it produces a true, 2-point contact, allowing out-of...
... sizes are needed for reamers from 0.276 to 2.362-in. diam. Blades for **diameters** 0.571 in. and up are mounted in a tight-locking cartridge. Madison/Cameron CIRCLE...
...are offered in 1/64 in. increments from 13/64, in. to 1/2 in. **diameter**. Metric sizes range from 5 to 12 mm. The PVD coating is grade UP20M. Fabmet...
...new, standard sizes are available, bringing to 53 the number of stock sizes offered in **diameters** ranging from 0.089 to 0.275 in., with lengths from 0.176 to 2...to 0.170 in. for boring depths from 1/4 to 7/8 in. A helical cutting section improves curl and chip removal. The rigid, solid carbide stems are induction-brazed...
...flex to buff or polish without removing material on any surface, including those with narrow grooves or cavities. Are Abrasives CIRCLE NO. 259 Epoxy insulates and adheres when used on metals...
...Inc. Portable pneumatic power comes to band saws. Developed for heavy duty use in cutting pipe, bolts, angle iron, solid steel, and super alloys, the saw eliminates hazards posed by electric...angle. The blade bodies are heavy-gage, balanced and tensioned steel plate. They come in **diameters** from 6% to 10 in., all with -in. bores. They can be used with portable...may not be accessible with files, stones, sandpaper, or emery cloth. The cords come in **diameters** from 0.012 to 0.150 in.; tapes come 1/16- to 1/4-in...

9/6,K/15 (Item 9 from file: 148)
DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
05467815 SUPPLIER NUMBER: 11234064 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Extrusion systems: product lines reviewed. (1991-1992 Manufacturing Handbook and Buyers' Guide)
July 15, 1991
WORD COUNT: 10997 LINE COUNT: 00917
A.I.M. INTERNATIONAL INC.

Offers a full line of corrugators can capable of producing a tubing from 0.33- to 31.50-in. diam, out of PVC, PE, PP, PA, PFA...
...quality product along with maximum output rates. Also offered is equipment to produce large-bore pipe out of PVC, PE, PP, etc., up to 120-in. diam. through a spiral winding system patented by A.G. Petzetakis.

Company can offer a complete line of machinery and...
...2-, 2- and 2 1/2-in. diam.) and also manufactures custom-designed units with **diameters** up to 8 in. All models have bimetallic-lined barrels with up to 30:1...
...for single-layer HDPE and for co-extrusion of HDPE with LDPE and LLDPE.

Screw **diameters** range from 1.5 to 3.5 in.; dies and air rings measure 3 to...

...80, 100, and 130 are twin-screw extruders with L/D ratio of 24:1. **Diameters** range from 1/2 in. to 36 in., and outputs from 250 to 2400 lb... pelletizing extruders with melt-feed, cold-feed and batch-feed designs are being offered in **diameters** up to 20 in. Output rates extend to over 60,000 lb/hr.

STEWART BOLLING...Sano Design & Machine Co.

A brand-new Apex line of single-screw extruders comes in **diameters** of 2 1/2, 3 1/2, 4 1/2 and 6 in. with standard... ..to 60 in. of corrugated pipe, including systems for dual-wall corrugated pipe, and large- **diameter** spiral - wound pipe from 15-in. to over 66-in. diam. Company also builds aftercoolers, perforators, slitters, cut-offs and winders, and offers a complete line of extruders with its corrugators .

New products include rib pipe systems for underground electrical utility ducting and sanitary sewer pipe...6-in. diam. from 15:1 to 30:1 L/D.

* Lighter-duty extruders in **diameters** of 3/4, 1, 1 1/4, 1 1/2, and 2 in., and up...systems for tubing or profile. Its patented Tubetrol system controls both the outside and inside **diameter** of tubing or pipe of any size.

HARTIG PLASTICS MACHINERY DIV.

SOMERSET TECHNOLOGIES, INC.

Supplies standard and custom designed single-screw extruders ranging in screw **diameter** from 3/4- to 15-in. and in screw **diameter** from 3/4- to 15-in. and in variable L/D ratios depending upon application...sizes range from 40- to 500-mm diam. Internal bubble cooling is available on die **diameters** of 120-500 mm. Haul-offs can be arranged in stationary, variable-height or oscillating...and high-performance screws.

Company supplies custom reclaim extruders up to 8 in. using dual-**diameter** extruders and/or hopper crammers, depending on the feed material. Both new systems and retrofit...

...single and dual automatic take-ups, take-up stands, and cabling machinery. Line options include **diameter** , capacitance, temperature, elongation and synchronization control systems.

NORMAG CORP.

Manufactures complete gear pump systems for...line slitting, automatic web transfer and handling, web widths up to 160 in., and roll **diameters** up to 60 in. Turnkey, custom-engineered film extrusion systems and line components are also...

...PE, PP, and PET are manufactured. Single-screw extruders come in 1- to 6-in. **diameters** , and downstream equipment includes dies, feedblocks, controls, cooling rolls, and winders.

STEELASTIC See NRM-Steelastic...single-screw extruders (for blown film, cast film, blow molding, and profile extrusion) in typical **diameters** of 2-, 2 1/2-, 3 1/2-, and 4 1/2-in.; manual screenchangers; screws; single-layer and multilayer spiral blown film die assemblies with **diameters** up to 60 in.; internal bubble-cooling systems and high-output dual-lip air-cooling...

...systems specifically custom engineered with inline slitting, web widths up to 160 in., and roll **diameters** up to 60 in.; fixed or adjustable towers; control panels; film treaters; post gusseters; and...

...INC.

Company supplies high-performance single-screw extruders with herring-bone change-gear reducers. Screw **diameters** range from 1 1/4 to 12

in. and L/Ds from 24:1 to...with most extruders.

WERCO, INC.

Sells a line of small single-screw coextruders with screw **diameters** from 3/4 to 2 1/2 in. Coextruders are pedestal or turret-mounted. Cooling

...location along the process length. The barrel is also made of individual sections approximately four **diameters** long. Different types of barrel sections are available for feeding, venting, injection of liquids, removal

...screw extruders and extrusion systems designed for a specific single material or coextrusion application. Bore **diameters** range from 1 1/4 through 6 in. L/D ratios range from 20:1...

...technology, oscillating haul-off, and precision winders.

In addition to its standard dies, ranging in **diameter** from 4.7 to 49 in., the company offers a wide range of sizes for its Optifil P automatic blown film die, which is available in **diameters** from 11 to 35 in. for monolayer films and 9 to 35 in. for three...

9/6,K/16 (Item 10 from file: 148)

DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.

02321751 SUPPLIER NUMBER: 03585200 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Capital equipment - machining. (includes directory) (1985 Buyer's Guide)

Jan, 1985

WORD COUNT: 4137 LINE COUNT: 00328

... Inc. 1614 Control Laser Corp. 1615 Delta International Machy. Corp. 1616 DoAll Co. 1617 Emerson, Ridge Tool 1618 Household Int'l, Simonds 1619 Ingersoll-Rand, Waterjet Sys. 1620 Iscar Metals Inc...produces small parts by runnerless molding. Model P3 terminates or encapsulates wire leads, cables, and tubing --Gluco Inc., Pittsburgh Small parts former. Forming machine turns coiled wire into as many as 300 finished parts per min. Micro-Former produces parts with **diameters** of 0.12 in. or smaller--National Machinery Co., Tiffin, Ohio Laser system. Model 4100... capacity models for 5C spindle machines, and in a 6-ft, 1-5/8 in. **diameter** bar capacity model for 16C spindle machines--Hardinge Brothers Inc., Elmira, N.Y. Flash remover...

...Waldwick, N.J. Deep hole drilling. Four models of Uni-T Stroke-Savers handle tool **diameters** from 0.078 to 4 in. Drilling strokes of 10, 20, 30, and 48 in...

...High-speed grinding. Selection guide examines high-speed grinding machines used for production of flats, grooves, forms, and helical configurations. Discusses advantages of high-speed grinding compared with conventional methods--Gubring Inc., Brookfield, Wis...

9/6,K/17 (Item 1 from file: 160)

DIALOG(R)File 160:(c) 1999 The Gale Group. All rts. reserv.

02020768

Fast size change and economy are claimed for spiral-wound hose process September, 1988

CMI Intl's (San Clemente, CA) new 2-stage process produces spirally winding flexible hose from ribbed or corrugated extrudate. The process can also be changed over from 1 type and size of hose...

... another in a minute or 2. The system is capable of producing hose with internal **diameters** ranging from 25-100 mm at rates of 180-900 m/hr. The system can...

... is needed. The 1st step of the process involves extruding any narrow profile desired to form the spiral rib and connecting web in the hose.

The narrow strip of profile is sized, cooled...
...fed at room temperature to the hose-winding machine, which uses a set of 5 grooved helical rollers to spirally wind the profile over a mandrel. A hermetically sealed seam is made using a proprietary injector ...
...system is for hose ranging from 25-100 mm. Its Class II will be for pipe with internal **diameters** ranging 13-700 mm, and Class III for pipe with internal **diameters** ranging from 700-2,500 mm. ...

9/7/6 (Item 1 from file: 18)
DIALOG(R)File 18:Gale Group F&S Index(R)
(c) 2002 The Gale Group. All rts. reserv.
01027603 Supplier Number: 40495092
Fast size change and economy are claimed for spiral-wound hose process
Modern Plastics International, p36
Sept, 1988
ABSTRACT:
CMI Intl's (San Clemente, CA) new 2-stage process produces spirally winding flexible hose from ribbed or corrugated extrudate. The process can also be changed over from 1 type and size of hose to another in a minute or 2. The system is capable of producing hose with internal **diameters** ranging from 25-100 mm at rates of 180-900 m/hr. The system can also produce electrical current-carrying hose with 2-, 3-, and 4-lead encapsulated electrical wires. The system's compact design allows all post-extrusion fabrication to be performed at the location where it is needed. The 1st step of the process involves extruding any narrow profile desired to form the spiral rib and connecting web in the hose. The narrow strip of profile is sized, cooled, collected in a container, and stored until needed in step 2. In the 2nd step of the process, the pre-extruded strip is fed at room temperature to the hose-winding machine, which uses a set of 5 grooved helical rollers to spirally wind the profile over a mandrel. A hermetically sealed seam is made using a proprietary injector system. The hose take-off system is supported by using freely rotating discs. The roller and winding mandrel of the machine can be removed as a unit and replaced by another head with a different roller and mandrel design in about 30 sec. CMI Intl, which initially made the production system for its own production needs, plans to offer 3 systems for sale to the industry. Its Class I system is for hose ranging from 25-100 mm. Its Class II will be for pipe with internal **diameters** ranging 13-700 mm, and Class III for pipe with internal **diameters** ranging from 700-2,500 mm.
COMMENTS: CMI Intl: New 2-stage process produces spirally winding flexible hose

9/7/18 (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.
01522439
Spiral wound double wall pipe.
PLASTICS & RUBBER WEEKLY September 27, 1986 p. 171
Corma (Canada) has introduced an extruding line for producing double-walled, spiral wound corrugated high-density polyethylene pipe. The compact machine uses 3 interchangeable mandrels, which permits the machine to accept tooling to produce 380 millimeters to 1525 millimeters ID pipe. Changeovers take less than 1 hour. The pipe consists of a corrugated outer layer and a smooth inner layer, which is 20% of the

weight of the outer layer. This ratio increases the pipe 's overall compression strength by 50%. Designed for the continuous production of large **diameter** high-density polyethylene or PP pipe , the process requires only 1 winding machine. The system uses an endless mandrel with profiled forming blocks onto which a strip of material is spirally wound and fused together to make continuous pipe . To produce single-wall pipe , 1 extruder is required while pipe of 2 materials or 2 colors requires 2 extruders. A design limit is not imposed on the outer layer because this layer is formed on the blocks of the mandrel. Applications for the corrugated pipe include storm and sanitary sewers, agricultural drainage, culverts and utility ducting.

9/3,AB,K/9 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.
08124425 SUPPLIER NUMBER: 17389671 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Plastics technology: manufacturing handbook & buyers' guide 1995/96.(Buyers Guide)
Plastics Technology, v41, n8, pCOV(941)
August, 1995
DOCUMENT TYPE: Buyers Guide ISSN: 0032-1257 LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 174436 LINE COUNT: 15187

... pressure-control winding, gap winding, or optional reverse wind.
A.I.M. INTERNATIONAL INC.
Unicor corrugators produce tubing from 0.33- to 31.50-in. diam. of PVC, PE, PP, PFA, nylon, etc. Spiral - winding system patented by A.G. Petzetakis in Greece produces large-bore pipe up to 120...
...with segmented air rings, high-intensity cavity-mixing sections, gauge measurement systems, and automatic bubble- **diameter** control. Max. cooling capacity with HMW-HDPE is 30 lb/in. of die circumference. Bag...
...output, high-pressure machines, and TS 80, 100, and 130 have 24:1 L/D. **Diameters** range from 1/2 ...coilers, single and dual automatic take-ups, take-up stands, and cabling machinery. Options include **diameter** , capacitance, temperature, elongation and synchronization control systems.
MPL 32 system is for pipe and tubing...two rugged bearings, main shaft, and die housing. Dies available in varying thicknesses and hole **diameters** , with drive-speed variations to pelletize a wide range of plastics.

BERINGER DIV. JOHN BROWN...Sizes from single-strand lab units to 5000 lb/hr.

HYDRECLAIM CORP.
FF Series dual- **diameter** repelletizing systems for polyethylene film scrap use hot-face die cutting and air cooling to...in sizes and capacities to customer requirements.

Filament winders in a range of lengths and **diameters** . Floor-mounted or overhead traverse rails. Simple chain-drive traverse recommended. Windings from circumferential to...pulling. Only one water line is required. Thermal Pins eliminate scale and plugging of small- **diameter** water channels going into the core, reducing maintenance, and can isolate old or damaged mold...

9/3,AB,K/10 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.
07765229 SUPPLIER NUMBER: 16986852 (USE FORMAT 7 OR 9 FOR FULL TEXT)

The installation of corrugated metal pipe in large **diameter** bore holes.

(Umetco Minerals Corp.) (126th Annual Survey & Outlook Issue)

Bates, Anthony S.

E-MJ - Engineering & Mining Journal, v196, n3, p100(1)

March, 1995

ISSN: 0095-8948

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 2264

LINE COUNT: 00176

The installation of corrugated metal pipe in large **diameter** bore holes.

(Umetco Minerals Corp.) (126th Annual Survey & Outlook Issue)

... ft-dia corrugated-metal pipe and would represent a meaningful test case in terms of **diameter**, depth and water infiltration.

The installation was a complete success from both an engineering and

...

...raises for its company mines. Since that time, Umetco has drilled more than 80 large- **diameter** bore holes at the company owned mines and on a contract basis (E&MJ, Dec...

...and corrugated metal pipe. Tunnel liner is expensive and has a high friction factor. Large **diameter** plastic pipe is expensive and not readily available although new products are being developed and...

...weights, has satisfactory compressive strengths, acceptable friction factors, and is inexpensive compared to steel casing.

Corrugated metal pipe can be fabricated in any size and many weights. Standard sizes are less expensive and have greater availability. Corrugations available include 1 in. x 3 in. and 1/2 in. x 2 2/3 in. The 1/2 in. x 2 2/3 in. corrugations were selected for borehole lining because the compressive strengths are satisfactory and the friction factor

...

...Available thicknesses range from 18 gauge to eight gauge. Although 16 gauge and 14 gauge corrugated pipe have satisfactory compressive strengths, 12 gauge (0.109-in.-thickness) was chosen because it is...

...materials and cranes to remote locations. A common galvanized coating was chosen for rust resistance. Helical construction is cheaper than annular construction. Annular ends can be installed on helical corrugated metal pipe sections to facilitate banding for creating watertight seals between pipe sections. Long pipe sections (40 or more ft) reduce preparation and installation time.

Detailed information on air friction...progress on steel casing crane service is idle at costs up to \$325/hr.

Large **diameter** 12 gauge corrugated metal pipe has compressive strengths greater than comparably sized 3/8-in...similar installation by approximately 10%.

Conclusion

The design for installing corrugated metal pipe in large **diameter** bore holes has proven to be successful. Lining of boreholes with corrugated metal pipe should...

9/3,AB,K/11 (Item 5 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2002 The Gale Group. All rts. reserv.

07507232

SUPPLIER NUMBER: 15717485

(USE FORMAT 7 OR 9 FOR FULL TEXT)

Extrusion systems. (Manufacturing Handbook & Buyers' Guide 1994/95)

(Directory)

Plastics Technology, v40, n8, p199(11)

July 15, 1994

DOCUMENT TYPE: Directory

ISSN: 0032-1257

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 8780 LINE COUNT: 00732

... over optional), and optional auto-shaft handling and recording.

A.I.M. INTERNATIONAL INC.

Unicor corrugators produce tubing from 0.33- to 31.50-in. diam. of PVC, PE, PP, PFA, nylon, etc. Spiral - winding system patented by A.G. Petzetakis produces large-bore pipe up to 120-in. diam.

Complete line of machinery and equipment for multilayer foam-core... and for co-extrusion of HDPE with LDPE and LLDPE, EVA, EVOH, and ionomer. Screw **diameters** from 1.5 to 3.5 in.; dies and air rings from 3 to 22...

...with segmented air rings, high-intensity cavity-mixing sections, gauge measurement systems, and automatic bubble- **diameter** control. Maximum cooling capacity with HMW-HDPE is 30 lb/in. of die circumference. Bag... output, high-pressure machines, and TS 80, 100, and 130 have 24:1 L/D. **Diameters** range from 1/2 in. to 36 in., and outputs from 250 to 2400 lb... ..in-line slitting, automatic web transfer and handling, web widths to 160 in., and roll **diameters** to 60 in. Turnkey, custom-engineered film extrusion systems and line components also provided.

STEWART...for parallel and conical twin screws of German and Austrian makes.

Single-screw extruders in **diameters** of 1 1/2 to 8 in. with standard L/Ds of 25:1 and...

...4- to 36-in I.D.) pipe for electrical conduit, drainage, sewers, culverts. Also large- **diameter** spiral - wound pipe systems from 15- to over 60-in. I.D., as well as aftercoolers, perforators, slitters, cut-offs and high-speed winders for small-diam. tubing. Offers full line of extruders with corrugated lines. Also in-line cuff systems for single-wall and double-wall corrugators,

CROWN PRODUCTS, INC. CROWN MACHINE DIV.

Bi-axial and uni-axial film orientation equipment to...so that L/D ratio is easily adjustable. Screws are either corotating or counterrotating. Screw **diameters** from 29 to 125 ram.

INSTAMELT SYSTEMS

Unique "screwless" extruder has a smooth rotor housed...special controls, and high-performance screws.

Custom reclaim extruders to 8-in. diam. use dual- **diameter** extruders and/or hopper crammers, depending on feed material.

Single-screw, custom compounding extruders to...

...coilers, single and dual automatic take-ups, take-up stands, and cabling machinery. Options include **diameter**, capacitance, temperature, elongation and synchronization control systems.

MPL 32 system is for pipe and tubing...processing operations using ultrasonic noncontacting sensor head. Remotely mounted, the sensor head measures the changing **diameter** of the roll being processed; loading and unloading rolls is not hampered by mechanical follower arms. Unit measures changes in **diameter** as small as 0.010 in., can sense virtually any material, and can handle any...

...pneumatic clutches/brakes through a patented cam/lever arrangement. A follower arm rides on the **diameter** of a roll being unwound or wound and tracks the changing **diameter**, varying air-pressure to the clutch or brake. Adaptable to varying torque requirements and a...

File 95:TEME-Technology & Management 1989-2002/Oct W2

File 9:Business & Industry(R) Jul/1994-2002/Oct '25

File 15:ABI/Inform(R) 1971-2002/Oct 26

File 16:Gale Group PROMT(R) 1990-2002/Oct 25

File 18:Gale Group F&S Index(R) 1988-2002/Oct 28
File 20:Dialog Global Reporter 1997-2002/Oct 28
File 148:Gale Group Trade & Industry DB 1976-2002/Oct 28
File 160:Gale Group PROMT(R) 1972-1989
File 481:DELPHESES Eur Bus 95-2002/Oct W3
File 553:Wilson Bus. Abs. FullText 1982-2002/Aug
File 608:KR/T Bus.News. 1992-2002/Oct 28
File 624:McGraw-Hill Publications 1985-2002/Oct 25
File 636:Gale Group Newsletter DB(TM) 1987-2002/Oct 28
File 637:Journal of Commerce 1986-2002/Oct 24
File 696:DIALOG Telecom. Newsletters 1995-2002/Oct 28

Set	Items	Description
S1	777892	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	3647	SPIRAL?(3N) (WIND??? OR WOUND OR FORM???)
S3	334312	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?.
S4	192824	DIAMETER?? OR DIAMETRE??
S5	26808	HELIX?? OR HELIC???
S6	31	S1(S) (S2 OR S5) (S)S3 AND S4
S7	27	RD (unique items)
S8	8	S7/2002 OR S7/2001 OR S7/2000 OR S7/1999
S9	19	S7 NOT S8

12/26, TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
010732004

WPI Acc No: 1996-228959/199623

Construction of flexible pipelines for signal transmission in hydraulic and pneumatic control systems - employs adjustably pressurised tube threaded between spirally wound corrugations of inner braiding and outer braiding, composed of multi-sized sections joined by throttling bushes to counteract vibrations

12/26, TI/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
010429052

WPI Acc No: 1995-330372/199543

Bellowed protective sleeve for articulated joint of vehicle transmission shafts - comprises conical flexible tube with central bellows having undulations forming single spiral and two ends composed of successive increasing internal **diameter** cylindrical parts with external grooves for locking collar

12/26, TI/13 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
04293392
SURFACE GROOVING METHOD AND APPARATUS FOR THERMOPLASTIC RESIN TUBE

12/26, TI/15 (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
03405069
STRUCTURE FOR CONNECTING REFRIGERANT PIPES AND MANUFACTURE THEREOF

12/26, TI/16 (Item 9 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

03179913

BELL-MOUTH FOR CORRUGATED TUBE

12/26, TI/17 (Item 10 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

02723367

SURFACE POLISHING METHOD FOR PIPE MADE OF ARAMID FIBER-REINFORCED
COMPOSITE MATERIAL

12/26, TI/20 (Item 13 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

01135484

INSERT TYPE HEAT PIPE AND INSERTION THEREOF

12/26, TI/21 (Item 14 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

01078226

METHOD OF FORMING SPIRAL GROOVE IN THE INTERNAL SURFACE OF METAL
PIPE WITH SMALL **DIAMETER**

12/26, TI/22 (Item 15 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

00962629

WORKING DEVICE FOR INNER FACE AND OUTER FACE OF METALLIC TUBE

14/26, TI, K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

009166009

WPI Acc No: 1992-293443/199236

Optical fibre cable for thermal sensors - has construction of PTFE-coated
fibre wound round metal or plastic core and lying inside steel tube
filled preferably with watertight gel

... construction of PTFE-coated fibre wound round metal or plastic core
and lying inside steel tube filled preferably with watertight gel

...Abstract (Basic): at least one coated fibre with extra length inserted
into a small metallic or plastic tube of o.d. between 2 and 5 mm, and
a protective outer sleeve extruded in...

...which has a constant radius over its whole length, and the sleeve is
smooth or corrugated with an o.d around 10 mm. If the sleeve requires
to be strong it...

...Abstract (Equivalent): construction: at least one coated light wave
guide (TS) is in the form of a helix - introduced into a tubule (R1.
R2) of metal or a synthetic material so as to project therefrom, which
tubule has an outer **diameter** between 1 and 5 mm, an extruded
protective sheath (M1) of a synthetic material or...

...exceeded, and c) the protective sheath (M1) is smooth or undulated and
has an outer **diameter** between 3 and 15 mm...

14/26, TI, K/2 (Item 2 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
008769449

WPI Acc No: 1991-273463/199137

Drilling pipe with helical ridges for drilling highly angulated wells - where helical ridge has flight wound so as to rise from bit with rotation of drill string to move cuttings from drill bit
Drilling pipe with helical ridges for drilling highly angulated wells...
...where helical ridge has flight wound so as to rise from bit with rotation of drill string to...
...Abstract (Basic): has drill string terminated with a bit which employs drilling fluid. A length of drill pipe is employed in the angulated drill string which has a helical ridge disposed about. Flight of the helical ridge is wound in the same direction as the rotation of the drill string to move...
...cuttings in a direction from the bit to the surface upon rotation. Height of the helical ridge above circumferential surface of the length of the drill pipe is 1- 15 % of **diameter** of drill pipe .
...
...USE/ADVANTAGE - Drill pipe with helical ridge for drilling highly angulated wells, to recover remaining oil reserves
...Title Terms: PIPE ;

14/26, TI, K/3 (Item 1 from file: 347)
DIALOG(R) File 347: JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
03237991
ELECTRODEPOSITION DRUM

ABSTRACT

... of reducing electricity loss between the inner drum and outer skin by winding a metallic pipe on the inner drum and shrink-fitting the outer skin on its outside...
... the inner drum 10 made of mild steel, for example, is turned, and a concave groove 14 is spirally formed on the periphery by machining. A pipe 15 of brass (Cu 35Zn) is then wound in the groove 16, and the pipe 15 is partially fixed to the drum 10 by welding, etc. The outer skin 11 is heated, inserted into the outside of the pipe 15 on the drum 10, allowed to cool and shrink-fitted. In this case, the thickness of the outer skin 11 is controlled to 5mm, the outer and inner **diameters** of the pipe 15 respectively to 3.5mm and 1mm, and the winding pitch of the pipe 15 to 4mm. By this structure, the tightness of the pipe is enhanced by its elasticity in addition to its thermal expansion, the contact pressure between...

12/7/3 (Item 3 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2002 Thomson Derwent. All rts. reserv.
009549422 **Image available**
WPI Acc No: 1993-242972/199330

Metal tube internal spiral groove formation method - involves drawing tube with inner surface contacting roughing spinner with spiral teeth, before redrawing while contacting smaller spinner
Patent Assignee: FOX F J (FOXF-I)

Inventor: FOX F J

Number of Countries: 020 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9313887	A2	19930722	WO 92US11237	A	19921228	199330 B
US 5327756	A	19940712	US 91815031	A	19911231	199427

Priority Applications (No Type Date): US 91815031 A 19911231

Cited Patents: No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9313887	A2	E	23	B21D-000/00	
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Designated States (National): CA JP KR

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

US 5327756	A		9	B21B-015/00	
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Abstract (Basic): WO 9313887 A

The method involves subjecting the interior surface of the tubing (10) to a spinner (34) provided with groove forming teeth (48,50) having teeth crests which engage the tubing. It uses only radial forces acting at the crests of the teeth to form spiral grooves by continuously increasing a beginning depth to the concluding depth and continuously decreasing a beginning helix angle to the concluding helix angles.

The spinner groove forming element rotatably engages the tubing surface. The radial forces act perpendicular to the tubing surface, and the teeth have vertical sides where contact on the sides of the teeth is substantially eliminated.

USE - A method of forming spiral grooves on the interior surface of tubing, the grooves having a concluding depth and a concluding helix angle.

Dwg.1/8

Abstract (Equivalent): US 5327756 A

The method comprises subjecting the interior surface of the tubing to spinner provided with groove forming teeth having teeth crests which engage the tubing surface, when the tubing is reduced in **diameter** and using only radial forces acting at the crests of the teeth to form the spiral grooves, by continuously increasing a beginning depth to the concluding depth and continuously decreasing a beginning helix angle to the concluding helix angle to the concluding helix angles.

The spinner groove rotatably engages the tubing surface and the radial forces act perpendicular to the tubing surface. The teeth have vertical sides where contact on the sides of the teeth is eliminated.

ADVANTAGE - Provides grooving method and spinner where grooves are formed within metal tubing in commercial drawing machines without exceeding the tensile strength of the tubing, and will forms deep grooves having decreasing helix angle in the deformation zone ending in constant helix grooves in metal tubing in commercial drawing machines at speeds of up to 4,000 feet per minute.

Dwg.1/8B

Derwent Class: P51; P52.

International Patent Class (Main): B21B-015/00; B21D-000/00

International Patent Class (Additional): B21B-013/20

12/7/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

009155332 **Image available**
WPI Acc No: 1992-282774/199234

Device for forming spiral corrugations on pipes - has rotating
cylindrical hollow casing pipe centring bushes fitted in bearings and
forming rollers

Patent Assignee: SEVKABEL RES DES CONSTR TECHN INST (SEVK-R)

Inventor: FILONENKO V N; VOLKOV I A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1690889	A1	19911115	SU 4746976	A	19891009	199234 B

Priority Applications (No Type Date): SU 4746976 A 19891009

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
SU 1690889	A1		3	B21D-005/04	

Abstract (Basic): SU 1690889 A

The device casing (1) is rotated by a drive, and the pipe is fed
along the axis of the device and enters the shaping zone, where the
rollers (4) are positioned in such a way, on axes (5), that their
diameters uniformly increase in the direction of the pipe feed, and
sequentially engage the pipe and form a spiral corrugation on
it. The supporting projections (6) in the casing (1) are positioned
diametrically to each roller (4) with uniformly reducing spacing from
the axis of the device in the feed direction of the pipe.

ADVANTAGE - Enables to produce corrugated pipes of unrestricted
length. Bul. 42/15.11.91

Dwg.1/1

Derwent Class: P52

International Patent Class (Main): B21D-005/04

12/7/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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003337606

WPI Acc No: 1982-J5619E/198229

Spirally wound tube rolling mechanism - has corrugated strip guide
roller set with variable angle plane to produce various **diameter** tubes

Patent Assignee: HAHN F KG (HAHN-N)

Inventor: FRITZ H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3047518	A	19820715				198229 B

Priority Applications (No Type Date): DE 3047518 A 19801217; DE 22575 A
19801218

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3047518	A		11		

Abstract (Basic): DE 3047518 A

The mechanism uses corrugated strip for producing spirally
wound tubes of various **diameters**. The mechanism consists of base
plate (2) on which the rolling assembly (3) is mounted. The rolling
mechanism consists of ring-shaped carrier plate (4) with supporting
rollers (5) rotating on the circumference of the tube (1) to be rolled.
On the inlet point of the strip (8) the rolling mechanism has two

intake rollers (9,10) which are driven and act on the edges of the strip (8).

The inner intake roller (9) is fitted on the outside of the rolling mechanism and roller (10) is positioned on the external area of the roller mechanism. The mechanism is fitted with drive rollers (18) acting on the edges of the strip. The angle alpha enclosed by the strip and the connecting line of two opposite roller centres is smaller than ninety degrees.

1/1

Derwent Class: P51

International Patent Class (Additional): B21C-037/20

12/7/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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003161237

WPI Acc No: 1981-21776D/198113

Plastic tube mfr. by spirally winding extruded profile - has dovetail tongue and groove with filling strip levelling surface

Patent Assignee: PONT-A-MOUSSON SA (CIEP)

Inventor: LAGABE A; LANGENFELD M

Number of Countries: 012 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 25121	A	19810318				198113 B
BR 8005735	A	19810317				198115
FR 2464819	A	19810417				198123
US 4301200	A	19811117				198149
EP 25121	B	19830420				198317
DE 3062827	G	19830526				198322

Priority Applications (No Type Date): FR 7922550 A 19790910

Cited Patents: BE 565101; FR 1337887; FR 1446819; FR 2005613; FR 2023272; US 2516864

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 25121	A	F			
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Designated States (Regional): BE CH DE GB IT LI LU NL SE

EP 25121	B	F			
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Designated States (Regional): BE CH DE GB IT LI LU NL SE

Abstract (Basic): EP 25121 A

A profile (1) consisting of an extruded thermoplastic body (2) of rectangular section is provided at each side with a raised intermeshing structure, one being male and the other female. Each male (3) or female element (4) is formed by a projecting strip (10,13) which extends from the bottom wall (6) of the body to form a dovetailed tongue (11) at one side and a corresponding groove (12) at the other.

The profile is wound in a spiral to form a plastic pipe, smooth surfaced inside and out, of much larger **diameter** than can be extruded. An additional grooved strip fits between the facing side walls (7) and over the female section (4).

Derwent Class: A32; Q67

International Patent Class (Additional): B29D-023/12; F16L-009/16

12/7/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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002320497

WPI Acc No: 1980-C6930C/198012

Drain pipe for land reclamation work - is produced from plate which is rolled with projections and saddles to form strength enhancing corrugations

Patent Assignee: POLYMER MATERIAL ME (POLY-R)

Inventor: BEILIN D K H; KOCHANOV V G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 673698	A	19790718				198012 B

Priority Applications (No Type Date): SU 2519026 A 19770830

Abstract (Basic): SU 673698 A

The drain pipe has projections joined by means of the saddle shape recesses to increase its strength. The projections (2), made on the pipes surface (1), are joined to each other by a saddle shape recess (3). The pipe is made by passing the hot plate (1) through the rolls which form the open projections (2) and the saddles (3) between them. When the cold plate is rolled into a pipe the saddles are extended forming a continuous, corrugated surface thus increasing the pipe's strength and the stability across the **diameter**. The pipe can be spirally formed and the edges joined by displacing the edges of the projections and of the recesses.

Derwent Class: Q42; Q67

International Patent Class (Additional): E02B-011/00; F16L-009/16

12/7/8 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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05976900 **Image available**

HEAT TRANSFER PIPE WITH INTERNAL SURFACE GROOVE

PUB. NO.: 10-260000 [JP 10260000 A]

PUBLISHED: September 29, 1998 (19980929)

INVENTOR(s): KOSEKI KIYONORI

HIGO TOMIO

APPLICANT(s): KOBE STEEL LTD [000119] (A Japanese Company or Corporation),
JP (Japan)

APPL. NO.: 09-066391 [JP 9766391]

FILED: March 19, 1997 (19970319)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a heat transfer pipe with an internal surface groove in which an internal surface area of a pipe is large, and is excellent in discharge performance for a medium fluid and in heat transfer performance in both condensation and evaporation.

SOLUTION: There is provided an internal surface grooved heat transfer pipe in which there are formed a plurality of spiral parallel grooves 1 slanted in a pipe axial direction in a pipe internal surface and which has an outer **diameter** of 6 to 10 mm. The grooves 1 are provided in a cross section perpendicular to the pipe axis by $-1.71XD(\sup 2)+32.3XD-82$ or more where D (mm) is the pipe outer **diameter**, and a crest top angle .theta. of a crest shape 2 formed between adjacent two grooves 1 is at most 30 deg..

12/7/9 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

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05486293 **Image available**
HEAT TRANSFER PIPE WITH INNER SURFACE GROOVE
PUB. NO.: 09-101093 [JP 9101093 A]
PUBLISHED: April 15, 1997 (19970415)
INVENTOR(s): MASUKAWA SEIZOU
 KONO HARUO
 SUKUMODA TOSHITSUKA
APPLICANT(s): MITSUBISHI SHINDOH CO LTD [359370] (A Japanese Company or
 Corporation), JP (Japan)
APPL. NO.: 07-255359 [JP 95255359]
FILED: October 02, 1995 (19951002)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a small **diameter** inner surface grooved heat transfer pipe in which condensation efficiency is improved by preventing a tip end of a fin from being covered with a heat medium fluid.
SOLUTION: An inner surface grooved heat transfer pipe 1 is adapted such that many parallel spiral fins 2 are formed in the inner surface of a metal pipe. An outer **diameter** D of the heat transfer pipe is 3 to 6mm, a height H of each fin from a metal pipe inner peripheral surface is 0.15 to 0.20mm, a fin pitch P in the direction perpendicular to the longitudinal direction of the fin 2 is 0.23 to 0.39mm, a spiral angle .alpha. in the pipe axis direction of the fin is 9 to 16 degree, and an angle .beta. formed between opposite side surfaces of each fin 2 is 10 to 20 degree.

12/7/10 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
05176999 **Image available**
SPIRAL PIPE FOR COOLING CORE OF INJECTION MOLD, AND MANUFACTURE THEREOF
PUB. NO.: 08-132499 [JP 8132499 A]
PUBLISHED: May 28, 1996 (19960528)
INVENTOR(s): YAMAUCHI YOSHIO
 AZUMA SHOJI
APPLICANT(s): YOSHINO KOGYOSHO CO LTD [329435] (A Japanese Company or
 Corporation), JP (Japan)
APPL. NO.: 06-299064 [JP 94299064]
FILED: November 09, 1994 (19941109)

ABSTRACT

PURPOSE: To surely hold the pipe in the hole without slating, render the flow of cooling water uniform, and reduce the adherence of fur so as to reduce the necessity of cleaning by allowing the core-cooling spiral pipe to form ridged projection in a double-spiral form in the periphery of the cylinder.

CONSTITUTION: In the core-cooling device, a spiral pipe 3 is formed of a pipe cylinder 3a and double spiral ridged projection 3b made on the peripheral surface, and the **diameter** of which outer periphery is predetermined so that it can be inserted into the cooling hole 2b. Also, the end of the spiral pipe 3 is secured to a backing plate 2d and the part having the ridged projection 3b of the pipe 3 formed thereon is fitted and arranged within the cooling hole 2b. Then, the cooling flow path 4 of the core 2 is constituted of an inlet flow path 4a, inner flow path of the spiral pipe 3, cooling water spouting part 4c opposite to the gate, spiral flow path formed between the pipe 3 and the cooling hole 2d, and an outlet flow path 4e of a mold plate 2c, thus allowing cooling water to flow in the arrow direction.

12/7/11 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
05066196 **Image available**

TUBE WITH INNER SURFACE GROOVES AND MANUFACTURE THEREOF

PUB. NO.: 08-021696 [JP 8021696 A]
PUBLISHED: January 23, 1996 (19960123)
INVENTOR(s): YAMAMOTO KOJI

IKU FUMIO
HASHIZUME TOSHIAKI
SUMITOMO TETSUYA

APPLICANT(s): FURUKAWA ELECTRIC CO LTD THE [000529] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 06-155814 [JP 94155814]
FILED: July 07, 1994 (19940707)

ABSTRACT

PURPOSE: To obtain a tube with inner surface grooves which has high performance and no collapse of the grooves and no crack of the outer surface by forming many fine spiral grooves of a specific shape on the inner surface of the tube having a specific outer **diameter**.

CONSTITUTION: A copper tube is used as a blank tube 1. An ultrahigh hard plug 5 with grooves is held in the tube. The tube is rolled by a rolled ball 4. The shape of the plug 5 is transferred to the inner surface of the tube at a groove formed part 14 substantially as it is. Then, its outer periphery is hollow sunk by a hollow sinking die 6 in the later step, and finished to a tube 7 with the inner surface grooves having a final outer **diameter**. In this case, the fine spiral grooves formed on the inner surface of the tube 7 each has a depth H of $0.24\text{mm} \leq H \leq 0.35\text{mm}$, a groove bottom width W1 and a groove bottom width W2 of $W1/H = 0.65-0.85$ and $W2/H = 0.65-0.85$. The outer **diameter** of the tube 7 is 6-10mm. Thus, the tube with the inner surface grooves having the outer **diameter** of 6-10mm having high performance is stably obtained.

12/7/12 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
04326252 **Image available**

MANUFACTURE OF TUBE WITH GROOVED INSIDE SURFACE

PUB. NO.: 05-317952 [JP 5317952 A]
PUBLISHED: December 03, 1993 (19931203)
INVENTOR(s): IIJIMA SHIGEO

MORITA HIROYUKI
SUZUKI SHOJI

APPLICANT(s): SUMITOMO LIGHT METAL IND LTD [000227] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 04-154328 [JP 92154328]
FILED: May 20, 1992 (19920520)

ABSTRACT

PURPOSE: To reduce frictional resistance in a working time, to enlarge **diameter**-reducing rate and to prolong the life of a grooved plug by performing finishing work with multistage **diameter**-reducing rolls.

CONSTITUTION: A metal tube 1 which passes through a drawing die 5 is reduced in **diameter** by the draw die 5 and a floating plug 6, the **diameter**-reduced metal tube 6 is pressed strongly by an epicyclically rotating sphere 9 or rotation rolls through a grooved plug 7 from the

outer peripheral surface to form a continuous spiral groove M. The tube 4 provided with a continuous groove M is reduced in **diameter** through multistage **diameter**-reduced rolls 11 composed of opposed rolls 12, 13, 14, 15 arranged in a multiple stage. Since frictional resistance and take-off stress can be reduced in the rolls, the **diameter**-reducing rate in finishing for the tube can be increased, the grooved plug high in strength and large in **diameter** can be used to be improved in life.

12/7/14 (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
03530531 **Image available**
MANUFACTURE OF DRAIN LINING PIPE
PUB. NO.: 03-193431 [JP 3193431 A]
PUBLISHED: August 23, 1991 (19910823)
INVENTOR(s): NISHIDOME TERUO
APPLICANT(s): SEKISUI CHEM CO LTD [000217] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-337973 [JP 89337973]
FILED: December 25, 1989 (19891225)

ABSTRACT

PURPOSE: To manufacture a drain lining pipe in a relatively easy manner even when a mold having a complicated structure is not used by inserting a synthetic resin pipe having ridges preformed to the outer surface thereof in a metal pipe and increasing the **diameter** of the resin pipe to bring the resin pipe into close contact with the inner surface of the metal pipe.

CONSTITUTION: The synthetic resin pipe 20 capable of being inserted in a steel pipe 10 is made of a vinyl chloride resin whose **diameter** is enlarged or expanded as a whole at the time of heating and a predetermined number of ridges 20a...20a are spirally formed to the outer surface of the resin pipe 20 preliminarily. In preparing a drain lining pipe 3, a hot melt adhesive 21 is applied to one of the steel pipe 10 and the resin pipe 20 at first and the resin pipe 20 is inserted in the metal pipe 10. Next, for example, one end parts of the steel pipe 10 and the resin pipe 20 are sealed in the insertion state and the pipes 10, 20 are introduced into a heating furnace and heated to temperature capable of enlarging the **diameter** of the resin pipe 20 to soften the resin pipe 20. At the same time, the interior A of the resin pipe 20 is pressurized to enlarge the **diameter** of the resin pipe 20 and the resin pipe 20 is brought into close contact with the inner surface of the steel pipe 10 to allow the pipe inner surface parts 20a'...20a' positioned corresponding to the ridges 20a...20a to protrude inwardly.

12/7/18 (Item 11 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
02221792 **Image available**
HEAT TRANSFER PIPE FOR CONDENSATION AND MANUFACTURE THEREOF
PUB. NO.: 62-138692 [JP 62138692 A]
PUBLISHED: June 22, 1987 (19870622)
INVENTOR(s): KAWAMATA OSAMU
OTANI TADAO
OIZUMI KIYOSHI
APPLICANT(s): HITACHI CABLE LTD [000512] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 60-280039 [JP 85280039]

FILED: December 12, 1985 (19851212)

ABSTRACT

PURPOSE: To improve heat transfer performance on the outside and inside of a heat transfer pipe by providing a spiral dent line on the outer face of the heat transfer pipe with a specified pitch, putting a wire into the groove and providing a spiral protrusion on the inner face of the pipe along the line which traces on the inner face the dent line on the outer side.

CONSTITUTION: A heat transfer pipe 1 is provided on its outer face with grooves 2 of 0.7mm pitch and fins 3 of 1mm high and about 0.4mm thick. Each fin 3 has on its tip shallow depressions which are shorter than the depth of the groove 2. On this heat transfer face there is a metal wire 4 the **diameter** of which is 1mm and which is wound spirally with 7mm pitch on the pipe 1. On the inner face of the pipe 1 a line of protrusion 6 is provided which traces the metal wire 4. As the height of the protrusion 6 becomes larger, it has an effect of promoting turbulence in the fluid flow inside of the pipe which improves largely the rate of heat transfer in the pipe, but pressure loss accompanies. Accordingly the height of the protrusion 6 is selected according to the capability of a pump for driving fluid through the pipe 1. With this constitution it is possible to improve heat transfer performance on the inside and outside of a heat pipe for condensation.

12/7/19 (Item 12 from file: 347)

DIALOG(R)File 347:JAPIO

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01136810 **Image available**

MANUFACTURE OF PIPE WITH INSIDE SURFACE GROOVE

PUB. NO.: 58-074210 [JP 58074210 A]

PUBLISHED: May 04, 1983 (19830504)

INVENTOR(s): IEDA NORIO

SAKAI TERUSHIGE

APPLICANT(s): SUMITOMO LIGHT METAL IND LTD [000227] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 56-172524 [JP 81172524]

FILED: October 28, 1981 (19811028)

ABSTRACT

PURPOSE: To form a deep groove on the inside surface of a pipe easily and efficiently, by using a supporting plug which has worked a prescribed groove on a shoulder and an approach part, and repeating drawing plural times as necessary.

CONSTITUTION: When a metallic pipe 18 being a material to be worked is drawn out to the right through the inside of a die 10 and a tool 12, the first and the second small **diameter** pipes 20, 22 are formed, and when it passes through the inside of the die 10, it is pushed into the inside, and is strongly pressed against a shoulder part 26 or an approach part 28 of a supporting plug 24. Accordingly, on the inside surface of the metallic pipe 18, a spiral-like groove is formed continuously. In the same way, in the first small **diameter** pipe 20 drawn through the inside of the external pressure adding tool 12, groove-working is executed to its inside surface, but a groove of a plug 32 is selected by a desired deeper value against a groove of the supporting plug 24. In this regard, it is also possible to execute groove-working by adding the second and the third plugs with a groove in the rear of the plug 32 in accordance with thickness, the number of lines of the groove, etc. of the metallic pipe 18.

12/7/23 (Item 16 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2002 JPO & JAPIO. All rts. reserv.
00531812 **Image available**
METHOD OF DRAWING MULTIPLE PROTRUDING FLIGHTS SPIRALLY EXTENDING ON INSIDE
SURFACE OF PIPE
PUB. NO.: 55-019412 [JP 55019412 A]
PUBLISHED: February 12, 1980 (19800212)
INVENTOR(s): UEHARA KAZUO
SATO TAKUYUKI
APPLICANT(s): KOBE STEEL LTD [000119] (A Japanese Company or Corporation),
JP (Japan)
APPL. NO.: 53-091184 [JP 7891184]
FILED: July 25, 1978 (19780725)

ABSTRACT

PURPOSE: To make pipe difficult to rupture despite large drawing force and enable multiple protruding flights of deep grooves to be readily formed by dividing a floating plug to both function parts of reduction of bore and formation of spiral grooves and connecting these rotatably.
CONSTITUTION: The first plug element 14 consists of a guide part 15, approach part 16 and bearing part 17 and overlaps on the first drawing die 13. On the other hand, the second plug element 24 is of circular cylindrical form of a smaller **diameter** than the bearing part 17 and spiral protruding flights are formed only on the outside circumferential surface thereof and overlaps on the second drawing die 23. These both elements are connected rotatably means of a shaft bar 10 and if necessary by way of a support jig 9. A blank pipe 1 is drawn to a middle- **diameter** pipe 1a and only when it enters the second element 24, it is formed with spiral grooves 8 on the inside surface. At this time the element 24 is rotated but this rotating force is not transmitted to the element 24, thus there is no inconvenient increase in friction resistance.

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200268
File 344:Chinese Patents Abs Aug 1985-2002/Oct
File 347:JAPIO Oct 1976-2002/Jun(Updated 021004)
File 371:French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	1510861	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	37845	SPIRAL?(3N) (WIND??? OR WOUND OR FORM???)
S3	625112	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?
S4	542550	DIAMETER?? OR DIAMETRE??
S5	65902	HELIX?? OR HELIC???
S6	583	S1 AND (S2 OR S5) AND S3 AND S4
S7	117	S1(5N) (S2 OR S5) (5N)S3(S)S4
S8	278	S1 AND S2 AND S3 AND S4
S9	43	S1(5N)S2(5N)S3(10N)S4
S10	10	S9/2002 OR S9/2001 OR S9/2000 OR S9/1999
S11	33	S9 NOT S10
S12	23	S1/TI AND S11
S13	7153	15(3N)S4
S14	3	S6 AND S13

8/6/1 (Item 1 from file: 348)
01117868
High-pressure fiber reinforced composite pipe joint

8/6/2 (Item 2 from file: 348)
00807956
Improved apparatus for forming and cutting spiral pipe

8/6/5 (Item 5 from file: 348)
00649770
Corrosion resistant copper alloy tube and fin- tube heat exchanger

8/6/6 (Item 6 from file: 348)
00521019
Heat transfer tube with grooved inner surface.

8/6/7 (Item 7 from file: 348)
00513846
Heat-transfer small size tube and method of manufacturing the same.

8/6/8 (Item 8 from file: 348)
00397799
Apparatus for forming spiral pipe .

8/6/9 (Item 9 from file: 348)
00394926
Corrugated heat pipe .

8/6/12 (Item 12 from file: 348)
00313061
Method of manufacturing metallic tube with spiral fin.

8/6/13 (Item 13 from file: 348)
00287552
Corrugated heat pipe .

8/6/15 (Item 15 from file: 348)
00260037
Shell and tube heat exchanger.

8/6/16 (Item 16 from file: 348)
00147038
Heat-transfer tubes with grooved inner surface.

8/6/17 (Item 1 from file: 349)
00936876 **Image available**
REINFORCED CORRUGATED TUBING SYSTEM
Publication Year: 2002

8/6/18 (Item 2 from file: 349)
00859218 **Image available**
HEATING TUBE WITH INTERNAL GROOVES AND HEAT EXCHANGER
Publication Year: 2001

8/6/19 (Item 3 from file: 349)
00799068 **Image available**
SYSTEM AND METHOD FOR CORRUGATING SPIRAL FORMED PIPE
Publication Year: 2001

8/6/20 (Item 4 from file: 349)
00507284 **Image available**
PIPE PREPARING TOOL
Publication Year: 1999

8/6/23 (Item 7 from file: 349)
00330400
HIGH-PRESSURE FIBER REINFORCED COMPOSITE PIPE JOINT
Publication Year: 1996

8/6/24 (Item 8 from file: 349)
00239619
METHOD AND APPARATUS FOR FORMING SPIRAL GROOVES INTERNALLY IN METAL TUBING
Publication Year: 1993

8/6/25 (Item 9 from file: 349)
00225174 **Image available**
TRAVELLING MOLD TUNNEL APPARATUS FOR SMOOTH WALLED PIPE
Publication Year: 1992

8/6/26 (Item 10 from file: 349)
00137903 **Image available**
SHELL AND TUBE HEAT EXCHANGER
Publication Year: 1987

8/3,AB,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00738440

Method and apparatus for making a metallic ondulated tube
Verfahren und Vorrichtung zum Herstellen eines metallischen Wellrohres
Methode et dispositif pour fabriquer un tube metallique ondule
PATENT ASSIGNEE:

INSTITUT FRANCAIS DU PETROLE, (215425), 1 Avenue de Bois-Preau, 92500
Rueil Malmaison, (FR), (Proprietor designated states: all)

INVENTOR:

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Huvey, Michel, 2, avenue des Pinsons, F-78380 Bougival, (FR)

PATENT (CC, No, Kind, Date): EP 695592 A1 960207 (Basic)
EP 695592 B1 011212

APPLICATION (CC, No, Date): EP 95401575 950629;

PRIORITY (CC, No, Date): FR 949680 940802

DESIGNATED STATES: DE; GB; IT

INTERNATIONAL PATENT CLASS: B21D-026/14

ABSTRACT EP 695592 A1 (Translated)

Method and appts. for prodn. of a metal tube with corrugated wall

The method for shaping a metal tube by electromagnetism is characterised by: (a) a section of a metal tube (2) being placed between a means (1) capable of producing a magnetic field and a means (4) with required surface shape; (b) the device (1) being electrically activated to produce a force which deforms the tube wall and presses it against the means (4); (c) the means (1) and (4) being displaced longitudinally into another position along the length of the tube for continuation of the shaping process. The appts. incorporates means for longitudinal displacement of the tube relative to the means (1, 4) for step-by-step shaping of the tube (2).

TRANSLATED ABSTRACT WORD COUNT: 122

ABSTRACT EP 695592 A1

Method and appts. for prodn. of a metal tube with corrugated wall

The method for shaping a metal tube by electromagnetism is characterised by: (a) a section of a metal tube (2) being placed between a means (1) capable of producing a magnetic field and a means (4) with required surface shape; (b) the device (1) being electrically activated to produce a force which deforms the tube wall and presses it against the means (4); (c) the means (1) and (4) being displaced longitudinally into another position along the length of the tube for continuation of the shaping process. The appts. incorporates means for longitudinal displacement of the tube relative to the means (1, 4) for step-by-step shaping of the tube (2).

ABSTRACT WORD COUNT: 124

NOTE: Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): French; French; French

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(French)	EPAB96	684
CLAIMS B	(English)	200150	606
CLAIMS B	(German)	200150	554
CLAIMS B	(French)	200150	571
SPEC A	(French)	EPAB96	3251
SPEC B	(French)	200150	3247

Total word count - document A 3936

Total word count - document B 4978

Total word count - documents A + B 8914

Method and apparatus for making a metallic ondulated tube

Methode et dispositif pour fabriquer un tube metallique ondule

...CLAIMS means including a mandrel the outer diameter of which is slightly less than the inner diameter of the said pipe, the said mandrel including on its outer surface a helicoidal groove, characterised by the fact that it includes means for displacement of the pipe relative to...

8/3,AB,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00662367

Method for the production of helically or annularly corrugated tubes.

Verfahren zur Herstellung eines schraubenlinien- oder ringformig gewellten Metallrohres.

Procede pour la fabrication de tuyaux a ondulations annulaires ou helicoidales.

PATENT ASSIGNEE:

kabelmetal electro GmbH, (444380), Postfach 260, D-30002 Hannover, (DE),
(applicant designated states: BE;CH;DE;FR;GR;IT;LI;NL;SE)

INVENTOR:

Ziemek, Gerhard, Dr., Bunzlauerstrasse 6, D-30853 Langenhagen, (DE)

PATENT (CC, No, Kind, Date): EP 636432 A1 950201 (Basic)

APPLICATION (CC, No, Date): EP 94110452 940705;

PRIORITY (CC, No, Date): DE 4323649 930715

DESIGNATED STATES: BE; CH; DE; FR; GR; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS: B21C-037/08

ABSTRACT EP 636432 A1 (Translated)

In a method for the production of a helically or annularly corrugated

metal tube (10), a metal strip (2) is drawn from a supply coil (1) and formed to give a slotted tube which is longitudinally seam welded, whereupon a helical or annular corrugation is imparted to the welded tube by means of an annular corrugating tool (9) revolving eccentrically with respect to the longitudinal axis of the tube. During this process, a slotted tube with a ratio of the external diameter D to the wall thickness s of over 100 is formed, the slotted tube is welded with a laser or by means of pulsed TIG welding and the corrugation is produced with a ratio of corrugating pitch T or corrugation spacing Tp to corrugating depth t of less than 3.75.

TRANSLATED ABSTRACT WORD COUNT: 135

LANGUAGE (Publication,Procedural,Application): German; German; German

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(German)	EPABF2	144
SPEC A	(German)	EPABF2	896
Total word count - document A			1040
Total word count - document B			0
Total word count - documents A + B			1040

Method for the production of helically or annularly corrugated tubes .

...ABSTRACT strip (2) is drawn from a supply coil (1) and formed to give a slotted tube which is longitudinally seam welded, whereupon a helical or annular corrugation is imparted to the welded tube by means of an annular corrugating tool (9) revolving eccentrically with respect to the longitudinal axis of the tube. During this process, a slotted tube with a ratio of the external diameter D to the wall thickness s of over 100 is formed, the slotted tube is...

8/3,AB,K/10 (Item 10 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00344441

A corrugated pipe , a method of forming the corrugated pipe and an apparatus for manufacturing the same.

Wellrohr sowie Verfahren und Gerat zu seiner Herstellung.

Tuyau ondule, methode et dispositif pour sa fabrication.

PATENT ASSIGNEE:

MITSUBISHI PLASTICS INDUSTRIES LIMITED, (645460), 5-2, Marunouchi 2-chome , Chiyoda-ku Tokyo, (JP), (applicant designated states: DE;FR;GB;IT;NL)

INVENTOR:

Umemori, Noboru Mitsubishi Plastics Ind. Ltd., Hiratsuka Kojo 2480,

Shindo, Hiratsuka-shi Kanagawa-ken, (JP)

Kouda, Osamu Mitsubishi Plastics Ind. Ltd., Hiratsuka Kojo 2480, Shindo,

Hiratsuka-shi Kanagawa-ken, (JP)

Horii, Yukio Mitsubishi Plastics Ind. Ltd., Nagahama Kojo 5-8,

Mitsuya-cho, Nagahama-shi Shiga-ken, (JP)

LEGAL REPRESENTATIVE:

Wachtershauser, Gunter, Dr. (12711), Tal 29, D-80331 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 349778 A2 900110 (Basic)

EP 349778 A3 910522

EP 349778 B1 940119

APPLICATION (CC, No, Date): EP 89110283 890607;

PRIORITY (CC, No, Date): JP 88167534 880705

DESIGNATED STATES: DE; FR; GB; IT; NL

INTERNATIONAL PATENT CLASS: F16L-011/16; F16L-011/11;

ABSTRACT EP 349778 A2

A flat strip-like metallic material (1) having both surfaces coated with a first synthetic resin layer is passed between plural pairs of upper and lower rollers (31-36) so that a U-shaped recess (12) is formed at the central portion in the longitudinal direction of the strip material and ring-like projection (13) at both edges of the strip material. Then, the strip material is bent into a spiral form. The spirally wound strip material is passed to a transferring means (5) and first, second and third extruders (6-8) to extrude molten resin and first, second and third pressing rollers operating in association with the respective extruders, whereby a second synthetic resin layer is formed at the outer circumferential portion of the adjoining edges of the spirally wound strip material, a third synthetic resin layer is formed on the back side of the recess portion of the same, and a fourth synthetic resin layer is formed on the outer circumferential surface of the recess portion and the adjoining edges of the spirally wound strip material.

ABSTRACT WORD COUNT: 175

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	784
CLAIMS B	(German)	EPBBF1	730
CLAIMS B	(French)	EPBBF1	853
SPEC B	(English)	EPBBF1	3172
Total word count - document A			0
Total word count - document B			5539
Total word count - documents A + B			5539

A corrugated pipe , a method of forming the corrugated pipe and an apparatus for manufacturing the same.

...SPECIFICATION an electric heater, the gas burner or any other suitable means as far as the spirally wound strip material is heated at a temperature of 50(degree)C-80(degree)C.

When the spirally wound strip...pipe of the present invention, the flat strip-like metallic material is bent in a spiral form , and the adjoining edges of the spirally wound strip material are made in contact to each other, followed by covering the outer circumferential portion...

8/3,AB,K/11 (Item 11 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00313495

Cold drawing technique and apparatus for forming internally grooved tubes.
Kaltziehverfahren und Vorrichtung zur Herstellung von innengerillten Rohren.

Procede d'etirage a froid et appareil pour la fabrication de tubes a cannelures internes.

PATENT ASSIGNEE:

THE BABCOCK & WILCOX COMPANY, (220101), 1010 Common Street, P.O. Box 60035, New Orleans, Louisiana 70160, (US), (applicant designated states: AT;DE;ES;FR;GB;IT;SE)

INVENTOR:

Mayer, Dean Lowell, Rt. No 1 Box 847, Fremont Indiana 46737, (US)

LEGAL REPRESENTATIVE:

Purvis, William Michael Cameron et al (35031), D. Young & Co. 10 Staple Inn, London WC1V 7RD, (GB)

PATENT (CC, No, Kind, Date): EP 295919 A2 881221 (Basic)

EP 295919 A3 891123
EP 295919 B1 920304

APPLICATION (CC, No, Date): EP 88305519 880616;
PRIORITY (CC, No, Date): US 64048 870619
DESIGNATED STATES: AT; DE; ES; FR; GB; IT; SE
INTERNATIONAL PATENT CLASS: B21C-037/20;
ABSTRACT EP 295919 A2

Formation of continuous grooves in the internal surface of a tube shell (10) is effected in a single continuous cold drawing step, by first sinking the tube shell (10) in a die over a reduced diameter cylindrical mandrel portion (20) so that the diameter of the inner surface of the tube shell (10) is reduced to a dimension below the base of grooves (22) of a grooved plug portion (21) of the mandrel (20) thereby retarding longitudinal movement of a portion of the reduced internal surface of the sunk tube shell (10) at a plurality of circumferentially spaced intervals to effect formation of longitudinally continuous shallow grooves. The mandrel (20) is allowed to rotate if it is desirable to facilitate the formation of spiral grooves on the tube inner surface.

ABSTRACT WORD COUNT: 134

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	392
CLAIMS B	(German)	EPBBF1	412
CLAIMS B	(French)	EPBBF1	421
SPEC B	(English)	EPBBF1	2228

Total word count - document A 0

Total word count - document B 3453

Total word count - documents A + B 3453

Cold drawing technique and apparatus for forming internally grooved tubes.
Procédé d'étirage à froid et appareil pour la fabrication de tubes à cannelures internes.

...SPECIFICATION broaching, informing, extruding and drawing techniques.

Various grooving techniques are described in patent specifications.

US- A -2, 392 , 797 discloses a technique to impart rifling, fluting or ridging to an internal tubular surface, particularly for a gun barrel or liner, through the use of a die and a mandrel arrangement including a mandrel having a surface configuration which is converse to that to be imparted to the tube . The die compresses the tube onto the mandrel, by relative axial movement of the tube...

...formed by a stationary die and a cooperating rotatable rifling mandrel simultaneously to size the tubing and form spiral projections on the interior surface of the tubing . The die includes a tapered frusto-conical lead-in portion followed by a cylindrical portion which gradually reduces the outside diameter of the tube to the desired final outside diameter . The initial contact of the internal surface of the tube on a portion of the rifling mandrel and the contact of the outer surface of...

...portions of the inside surface of the tube are radially forced into the grooves of the rifling mandrel simultaneously with a portion of the outer surface diameter reduction. The specification indicates that the technique is useful for the production of rifled aluminium barrels and...

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00272181

Method for extruding and expanding polytetrafluoroethylene tubing and the products produced thereby.

Verfahren zum Extrudieren und zur Dehnung von Polytetrafluorethylen-Rohren und erzeugte Produkte.

Procede pour extruder et dilater des tubes en polytetrafluorethylene et le produit ainsi forme.

PATENT ASSIGNEE:

W.L. GORE & ASSOCIATES, INC., (268451), 555 Paper Mill Road P.O. Box 9329
, Newark Delaware 19714-9206, (US), (applicant designated states:
AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

INVENTOR:

Biggerstaff, Charles Edward, 58 Pine Dell Drive, Flagstaff Arizona 86001,
(US)

Campbell, Michael Lee, 3022 E. Lewis, Flagstaff Arizona 86001, (US)

Riffle, Rob Gordon, 2 Pinto Drive West, Flagstaff Arizona 86001, (US)

Williams, Benjamin Griffith, Rt. 1, Leupp Road, Flagstaff Arizona 86001,
(US)

LEGAL REPRESENTATIVE:

McCallum, William Potter et al (33662), Cruikshank & Fairweather 19 Royal
Exchange Square, Glasgow G1 3AE Scotland, (GB)

PATENT (CC, No, Kind, Date): EP 267719 A2 880518 (Basic)
EP 267719 A3 881228
EP 267719 B1 920506

APPLICATION (CC, No, Date): EP 87309673 871102;

PRIORITY (CC, No, Date): US 930411 861113

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: B29C-047/00; B29C-055/00;

ABSTRACT EP 267719 A2

Apparatus, and a method, for extruding and expanding tubular products of polytetrafluoroethylene (PTFE), and the products produced thereby, are provided. In the apparatus, at least one helical groove (26 or 28) is placed in the wall of the extruder tip or die. Preferably, at least one groove (28) is machined in the tip (18) having a pitch angle of 135 degrees and at least one groove (26) is machined in the die (24) having a pitch opposite that (45 degrees) of the tip groove. In the expanded tube, at at least one radial position within the wall of the tube, substantially all of the longitudinal axes of the nodes are oriented at an angle between 85 degrees and 15 degrees with respect to the longitudinal axis of the tube. In a preferred embodiment, substantially all of the longitudinal axes of the nodes located adjacent the inside wall of the tube are oriented at an angle between 85 degrees and 15 degrees with respect to the longitudinal axis of the tube, and substantially all of the longitudinal axes of the nodes which are located adjacent the outside wall of the tube are oriented at an angle between 15 degrees and 165 degrees with respect to the longitudinal axis of the tube. The grooved extrusion tip and die give the finished tube increased hoop strength.

ABSTRACT WORD COUNT: 230

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1023
CLAIMS B	(German)	EPBBF1	887
CLAIMS B	(French)	EPBBF1	1038

SPEC B (English) EPBBF1 4945
Total word count - document A 0
Total word count - document B 7893
Total word count - documents A + B 7893
Method for extruding and expanding polytetrafluoroethylene tubing and the products produced thereby.
Procède pour extruder et dilater des tubes en polytetrafluorethylene et le produit ainsi forme.
...SPECIFICATION not recorded because of indistinct nodal separation.
To compute wall thickness one subtracts the inner diameter measurement from the outer diameter measurement and divides by two .
The following examples which disclose processes and products according to the present invention are illustrative only and are not intended to limit the scope of the present invention in any way.
EXAMPLE 1
Expansion Of Tube : Die With One Helical Groove .
PTFE resin (Fluon CD-123, Fluon being a registered trade mark) was blended with 121cc...reduction ratio of about 123:1 in cross-sectional area from billet to the extruded tube . The extruder tooling consisted of a smooth surfaced tip and die having a single helical groove machined into it a pitch angle of 75(degree) with respect to the longitudinal axis of the die with a right hand twist. The depth of the groove was 0.51mm. After removal of lubricant, the extruded tube was used to produce a cylindrical tube of porous, expanded, amorphously locked PTFE having a 6mm internal diameter and outside diameter of 7.7mm by the process described in U.S. Patent No...
...was not amorphously locked, i.e. the PTFE was in an unsintered state.
Four such tubes with a mean inner diameter of 4.2mm and a mean outer diameter of 5.5mm were tested to determine longitudinal matrix tensile strength. The mean value was 13852 psi. (95510 kPa). The testing was done with whole tubes on an Instron Model 1122 pull tester. The following settings were used : 1) crosshead speed of 200mm/min.; and 2) initial distance between the jaws of 150mm. Matrix tensile strength values are at 23(degree)C.
EXAMPLE 4
Expansion Of Tube : Tip And Die With Four Helical Grooves And Subsequent Smoothing Of External Surfaces of Tubes .
A porous, expanded, amorphously locked PTFE tube was made from PTFE resin similar to that...

8/3,AB,K/21 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00412227
FLUOROPOLYMER TUBES AND METHODS OF MAKING SAME
TUBES EN POLYMERES FLUORE ET LEURS PROCEDES DE FABRICATION
Patent Applicant/Assignee:
W L GORE & ASSOCIATES INC.,
Inventor(s):
EGRES Ronald G Jr,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9802687 A1 19980122
Application: WO 97US12468 19970715 (PCT/WO US9712468)
Priority Application: US 96682037 19960716; US 97824241 19970325
Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB
GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ

PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN AT BE CH DE DK ES FI
FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 13029

English Abstract

Flexible tubes comprising a first layer of fluoropolymer membrane exhibiting a node and fibril structure and at least one subsequent layer of fluoropolymer membrane exhibiting a node and fibril structure. Each subsequent layer surrounds at least a portion of the outer surface of the immediately preceding layer. The invention also relates to methods of forming tubes of layered fluoropolymer membrane.

Detailed Description

... invention. For example, the addition of circumferentially oriented corrugations may assist in maintaining the internal diameter of the tube during axial, angular or lateral displacement of one part of the tube relative to another...

...Longitudinally oriented corrugations may be provided to assist in circumferential collapse. Figures 12A-12C show corrugated tubes having helical, circumferential and longitudinal corrugations, respectively, which may be fabricated in the present invention. Such corrugations could be incorporated into...

8/3,AB,K/22 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00406083

BOILER HAVING A HELICAL COIL OF SPIRALLY CORRUGATED PIPE

CHAUFFE-EAU A SERPENTIN CONSTITUE D'UN TUBE ONDULE EN SPIRALE

Patent Applicant/Assignee:

WAIPUNA INTERNATIONAL LIMITED,

INNES Rodney Mitchell,

KITE Murray James,

Inventor(s):

INNES Rodney Mitchell,

KITE Murray James,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9746828 A1 19971211

Application: WO 97N272 19970604 (PCT/WO NZ9700072)

Priority Application: NZ 280602 19960605

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN

MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU GH

KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB

GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 2533

English Abstract

A compact boiler (100) suited for portable usage in generating hot water and/or steam is described. The boiler (100) incorporates just one helical coil (106) formed from a spirally corrugated metal pipe of 1 mm thick, 20 mm diameter stainless steel wound into a single helix with the peaks of the corrugations of adjacent turns just touching one another. The spirally corrugated pipe resembles a screw having four starts. A series of concentric baffles (108, 109, 110) ensure that hot gases from a burner will pass over or between the pipe of the helix (106)

several times, thereby improving the transfer of heat to the water contained within the pipe.

BOILER HAVING A HELICAL COIL OF SPIRALLY CORRUGATED PIPE
CHAUFFE-EAU A SERPENTIN CONSTITUE D'UN TUBE ONDULE EN SPIRALE

English Abstract

...in generating hot water and/or steam is described. The boiler (100) incorporates just one helical coil (106) formed from a spirally corrugated metal pipe of 1 mm thick, 20 mm diameter stainless steel wound into a single helix with the peaks of the corrugations of adjacent...

13/6,K/1 (Item 1 from file: 349)

DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
00340526

WATER-BASED ADHESIVES CONTAINING THERMALLY-INHIBITED STARCHES
ADHESIFS A BASE D'EAU CONTENANT DES AMIDONS INHIBES THERMIQUEMENT

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 21297

Publication Year: 1996

Fulltext Availability:

Detailed Description

Detailed Description

... long been used as an adhesive material in various applications such as the fabrication of corrugated board, paper bags, paper boxes, laminated paperboard, spiral - wound tubes, gummed labels, gummed tapes and other gumming applications. See the discussion in Starch Chemistry and...pregelatinized starches were being heat treated, the gas was used at a velocity of 5@ 15 meter /min. When pregelatinized granular starches were being heat treated, the gas was used at a...

13/6,K/2 (Item 2 from file: 349)

DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
00273714

YIELDABLE CONFINED CORE MINE ROOF SUPPORT
SUPPORT DE TOIT DE MINE A NOYAU CONFINE ELASTIQUE

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5736

Publication Year: 1994

Fulltext Availability:

Detailed Description

Detailed Description

... containers have been tested successfully. Typically, 16 gauge, 14 gauge, 12 gauge, and 10 gauge helical and annular corrugated pipe which yields upon itself in an accordion-like fashion under axial load is preferred. Pipes...
...are possible for mine roofs which may range from less than 3011 to more than 15 feet in height. Performance characteristics, cost and weight are expected to be the critical factors for...

13/6,K/3 (Item 3 from file: 349)

DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
00191118

SELECTIVE DETECTION OF VAPORS
DETECTION SELECTIVE DE VAPEURS
Publication Language: English
Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 22401

Publication Year: 1991

Fulltext Availability:

Detailed Description

Detailed Description

... Figures 7 is an end view of a sample collector having a bundle of coated tubes in contact with a spiral wound metal foil which is corrugated to permit increased packing density.

Figure 8 is an end view of a spiral wound...at 7500C. Gas Chromatograph (GC) - Gas chromatograph (GC) had a quartz tube of length about 15 feet with a 0.32 mm ID, and internal surface of GC tube was coated with...

File 348:EUROPEAN PATENTS 1978-2002/Oct W03

File 349:PCT FULLTEXT 1979-2002/UB=20021024,UT=20021017

Set	Items	Description
S1	346714	PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING
S2	16049	SPIRAL? (3N) (WIND??? OR WOUND OR FORM???)
S3	181539	CORRUGAT? OR RIPPL??? OR RIDG??? OR GROOVE? ?
S4	364837	DIAMETER?? OR DIAMETRE??
S5	62135	HELIX?? OR HELIC???
S6	463	S1(5N) (S2 OR S5) (5N) S3
S7	67	S1(10N) S4(S) S6
S8	26	S1/TI AND S7
S9	2093	15() (FEET OR FOOT OR METER? ? OR METRE? ?)
S10	0	S6 AND S4(5N) S9
S11	0	S4 AND S10
S12	1180	S4 AND S9
S13	3	S6 AND S9
S14	190652	FEET OR FOOT OR FT OR METER? ? OR METRE? ?
S15	0	S6 (S) S4(5N) S14

File 411:DIALINDEX(R)

?sf all

You have 548 files in your file list.

Your SELECT statement is:

s spiral()(tube? ? or pipe? ?)(s)15()(feet or foot)(3n)diameter

Items	File
-------	------

Examined	50 files
Examined	100 files
Examined	150 files
Examined	200 files
Examined	250 files
Examined	300 files
Examined	350 files
Examined	400 files

2 654: US PAT.FULL._1976-2002/Oct 22

Examined	450 files
Examined	500 files

1 file has one or more items; file list includes 548 files.

1/3,K/1

DIALOG(R)File 654:US PAT.FULL.

(c) FORMAT ONLY 2002 THE DIALOG CORP. All rts. reserv.

4172460 **IMAGE Available

Derwent Accession: 1996-371309

Utility

CM/ Apparatus for continuous refractoryless calcining of gypsum; TERIES OF IMMERSION TUBE BURNERS WITHIN A REFRACTORYLESS KETTLE.

Inventor: Rowland, George E., Naperville, IL

Cloud, Michael L., Canton, OK

Milligan, Daniel J., Watonga, OK

Assignee: United States Gypsum Company (02), Chicago, IL

United States Gypsum Co (Code: 86424)

Examiner: Walberg, Teresa (Art Unit: 372)

Assistant Examiner: Wilson, Gregory A.

Law Firm: Tilton, Fallon, Lungmus & Chestnut

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 5927968	A	19990727	US 97997205	19971223
Division	US 5743954	A	19980428	US 95382612	19950202
Priority				US 97997205	19971223
				US 95382612	19950202

Fulltext Word Count: 8586

Description of the Invention:

...the present invention, the overall vertical dimension of the kettle 22 (FIG. 1) was approximately 15 feet , and the diameter of the kettle 22 was approximately 15 feet. Further, the thickness of the kettle shell...

1/3,K/2

DIALOG(R)File 654:US PAT.FULL.

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3972271

Derwent Accession: 1996-371309

Utility

C/ Method for continuous refractoryless calcining of gypsum; USING SERIES OF IMMERSION TUBE BURNERS WITHIN KETTLE

Inventor: Rowland, George E., Naperville, IL

Cloud, Michael L., Canton, OK

Milligan, Daniel J., Watonga, OK

Assignee: United States Gypsum Company (02), Chicago, IL

United States Gypsum Co (Code: 86424)

Examiner: Marcheschi, Michael (Art Unit: 118)

Combined Principal Attorneys: Hoffman, Richard B.; Lorenzen, John M.

	Publication Number	Kind	Date	Application Number	Filing Date
Main Patent	US 5743954	A	19980428	US 95382612	19950202
Priority				US 95382612	19950202

Fulltext Word Count: 8070

Description of the Invention:

...the present invention, the overall vertical dimension of the kettle 22 (FIG. 1) was approximately 15 feet, and the diameter of the kettle 22 was approximately 15 feet. Further, the thickness of the kettle shell...

File 654:US PAT.FULL. 1976-2002/Oct 22

Set Items Description

S1 2 SPIRAL() (TUBE? ? OR PIPE? ?) (S)15() (FEET OR FOOT) (3N)DIAMETER

6/6,K/1 (Item 1 from file: 764)

DIALOG(R)File 764:(c) 2002 Business Communication Co. All rts. reserv.
00077893

PIPE INDUSTRY: SUPPLIER INFORMATION/PROFILES: PLASTIC PIPE AND TUBING
SUPPLIERS: VINYL (PVC/CPVC) - PART II

Main Title: THE COMPETITIVE PIPE INDUSTRY

Pub. Date: JULY 1997

Word Count: 246 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...high pressure pipe for municipal use. It
also is expanding its capacity to make larger diameter pipe from
the current 12 inch max. to 24 inches...

Company Names (DIALOG Generated): Boyd Corp ; Contech Construction
Products Inc ; Diamond Plastics Corp ; Eagle Pacific
Industries Inc ; Extrusion Technologies Inc ; Freedom Plastics
...

6/6,K/2 (Item 2 from file: 764)

DIALOG(R)File 764:(c) 2002 Business Communication Co. All rts. reserv.
00077887

PIPE INDUSTRY: SUPPLIER INFORMATION/PROFILES: CORRUGATED STEEL SUPPLIERS

Main Title: THE COMPETITIVE PIPE INDUSTRY

Pub. Date: JULY 1997

Word Count: 184 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...pipe is a large and separate industry, since
this product is primarily made in larger diameters for drainage
from roads, etc. Because of the size and weight of the pipe, it...

Company Names (DIALOG Generated): Amatek Holdings ; Armco Steel ; Choctaw
Inc ; Construction Products ; Contech Construction Products
Inc ; Lane Enterprises ; Pacific Corrugated Pipe Co ; Wheeling
Pittsburgh Steel Corp ; Wheeling Corrugating...

6/6,K/3 (Item 1 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00135382

PRIVATE COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: PRIVATE PIPE COMPANIES (1997)

Pub. Date: NOVEMBER 1997

Word Count: 534 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...concrete lining. Its smooth interior is designed to improve hydraulic
efficiency, while its smaller outside diameter provides installation
economy. Aluminized Steel Type 2 corrugated pipe is fabricated from
steel coils coated...

Company Names (DIALOG Generated): Annual Sales ; Contech Construction
Products ; Key Products

6/6,K/4 (Item 2 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127800
COMPANY PROFILES: Contech Construction Products Incorporated
Main Title: LARGE DIAMETER PIPE TO 2001
Pub. Date: JULY 1997
Word Count: 613 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *
Main Title: LARGE DIAMETER PIPE TO 2001
...2, HEL-COR CL and CORLIX pipes.

The ULTRA-FLO storm sewer pipe, produced in diameters ranging from 18 to 108 inches, combines the advantages of steel or aluminum corrugated pipe ... between metals. The product is fabricated into pipe and helically corrugated. The pipe, available in **diameters ranging from six to 144 inches**, features lock seams or welded seams depending on ...CL's long lengths and lightweight construction significantly reduce installation and transportation costs. Available in diameters ranging from 24 to 108 inches, HEL-COR CL is corrosion-resistant and can be...
...drainage culverts, stream enclosures and underground conduits for highway, industrial, municipal and railway applications. Large diameter CORLIX is available in sizes ranging from twelve to 24 inches.

Smaller sizes are manufactured in diameters as small as six inches.

CORLIX comes with a full line of accessories and fittings...
...sections. Perforated pipe for underdrainage or recharge systems is also available.

The Company's large diameter plastic pipe product lines include a polyvinyl chloride (PVC) sewer pipe that is sold under...than competitive products such as cast iron or steel pipes.

A-2000 is available in diameters ranging from four to 30 inches.

Diameters ranging from 21 to 30 inches are available in 13-foot lengths while smaller diameters come in twelve-foot lengths...
Company Names (DIALOG Generated): Contech Construction Products

6/6,K/5 (Item 3 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127778
INDUSTRY STRUCTURE: General/Market Share
Main Title: LARGE DIAMETER PIPE TO 2001
Pub. Date: JULY 1997
Word Count: 405 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *
Main Title: LARGE DIAMETER PIPE TO 2001
The large diameter pipe industry in the US is highly competitive due to the large number of producers...
...and comparative advantages of offshore producers in areas such as labor and government subsidies. Large diameter pipe competition is primarily based on price, quality, service and timely delivery. However, price is...
...products because of needs for longevity and the high cost of premature failure.
The large diameter pipe industry is moderately concentrated with both

large, multinational firms and small private companies well...
...Spirolite (Chevron) are prime examples of high density polyethylene producers who are also leading large diameter high density polyethylene pipe producers. Ameron has a diverse product line encompassing concrete, steel and...pipe) and AB&I (cast iron pipe).

Most pipe producers supply a full range of diameters in order to be a broad line supplier and enhance overall competitiveness.

Hydro Conduit (CSR...

...specialty welded steel pipe and tubing products. Bethlehem Steel and Oregon Steel are major large diameter steel pipe producers. Clow (McWane), US Pipe & Foundry and American Cast Iron Pipe are leading...

...is a leading producer of corrugated steel pipe as well as a producer of large diameter polyvinyl chloride sanitary sewer pipe...

...Company Names (DIALOG Generated): American Cast Iron Pipe ; American Pipe ; Ameron ; AB & I ; Bethlehem Steel ; Chevron ; Concrete Pipe & Products ; Contech Construction ; CSR Limited ; Lamson & Sessions ; Lamson Vylon Pipe ; LTV ; Mitsubishi Kagaku ; Oregon Steel ; Petroleum ; PW...

6/6,K/6 (Item 4 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.

00127760

LARGE DIAMETER PIPE BY MARKET: Storm Sewers Market - Names of Key Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 83 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Main Title: LARGE DIAMETER PIPE TO 2001

Company Names (DIALOG Generated): Advanced Drainage Systems ; Ameron ; CertainTeed ; Chevron ; Concrete Pipe & Products ; Contech Construction Products ; Gary Concrete Products ; Lamson & Sessions ; Logan Clay Products ; Mission Clay Products ; MCP Industries...

6/6,K/7 (Item 5 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.

00127749

LARGE DIAMETER PIPE BY MATERIAL: Steel Pipe - Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 401 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Large diameter steel pipe and tube producers include Ameron, Bristol Metals (Synalloy), Contech Construction Products, LB Foster...

...still owned by Foster in June 1997.

Ameron produces heavy wall, welded steel pipe in diameters ranging up to 144-inches for long-term use in conveying potable water and wastewater...

...Bristol Metals (Synalloy) is the largest producer of welded stainless steel pipe in the US. Diameters range from 1/2-inch to 60-inches and are sold under the BRISMET name. Primary...

...aluminized steel and fiberbonded steel varieties with asphalt coatings available on all three types. Large diameters range from 24- to 120-inches.

Applications

include high strength drainage applications beneath airports, highways ...clad alloy for use in culverts, storm sewers and stream enclosures.

Napa Pipe manufactures large diameter steel pipe in diameters ranging from 16- to 42-inches primarily for use in pressurized underground or underwater oil...

...produces seamless standard and line pipe used in refining, chemical, construction and petrochemical industries in diameters ranging from two through 26-inches.

Pacific Corrugated Pipe produces standard corrugated metal pipe in large diameters ranging from 24- to 96-inches. Uses primarily encompass drains, sewers and flood control. Pennsylvania Steel Technologies produces steel pipe ranging in diameters from 20- to 42-inches using the company's continuous welding technique, which results in...

Company Names (DIALOG Generated): Ameron ; Bristol Metals ; Contech Construction Products ; LB Foster ; Napa Pipe ; Pacific Corrugated Pipe ; Pennsylvania Steel ; Synalloy

6/6,K/8 (Item 6 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127744

LARGE DIAMETER PIPE BY MATERIAL: Plastic Pipe - Polyvinyl Chloride Pipe
Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 468 (1 pp.)

Leading producers of large diameter polyvinyl chloride pipe in the US include J-M Manufacturing (Formosa Plastics), Lamson Vylon (Lamson...
...company is vertically integrated in the production of polyvinyl chloride resins.

Lamson Vylon produces large diameter polyvinyl chloride pipe for applications including sewer and drainage applications. Profile wall PVC pipe with smooth interior and exterior walls is available in diameters between 21- and 48-inches for use in storm, industrial, highway and other drainage uses...

...highway underdrains which has enhanced chemical and corrosion-resistance. North American Pipe (NAPCO) manufactures large diameter PVC pipe for use in municipal water distribution (diameters ranging from 16- to 30-inches) and gravity sewer uses (four- to 30-inch diameters). PW Pipe (Pacific Wester Extruded Plastics) produces PVC pipe for a variety of markets including...Freedom Plastics, Harvel Plastics, Kroy Industries, Rehau and Uponor. CertainTeed produces a variety of large diameter PVC pipe including pressure, gravity sewer pipe and water distribution pipe for industrial, environmental, water, sewer and drainage applications. Contech Construction Products produces the A-2000 line of large diameter polyvinyl chloride sewer pipe designed for sanitary sewer uses. This pipe is constructed with a smooth interior and corrugated exterior for high flow rates and enhanced strength.

Diameters ranging in size from 21- to 30-inches are available in 13 foot lengths.

Diamond Plastics produces large diameter pressure and water and sewer pipe. Water distribution pipe ranges in diameters from 14- to 24-inches. Sewer pipe diameters range from four- to 27-inches.

Freedom Plastics produces large diameter gasketed sewer (four- to 18-inch diameters), Schedule 40 drain, waste and vent pipe (1/2 to 16-inch diameters) and SDR35 sewer and drain pipe (three- to 18-inch diameters).

Gasketed pressure pipe can be used in potable water and other pressure applications. Harvel Plastics (Detrex) produces large diameter

polyvinyl chloride pipe for use in industrial applications such as oil refineries, chemical plants, wastewater...

Company Names (DIALOG Generated): Charlotte Pipe & Foundry ; Contech Construction Products ; Diamond Plastics ; Formosa Plastics ; Freedom Plastics ; Harvel Plastics ; J M Manufacturing ; Mitsubishi ; North...

6/6,K/9 (Item 7 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084793

COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Word Count: 489 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Main Title: LARGE DIAMETER PIPE TO 2000

...estimated at \$150 million. The Company employs 800 and is privately held.

Contech's large diameter plastic pipe product line consists of polyvinyl chloride (PVC) sewer pipe. The PVC sewer pipe...

...design acts as a cutting guide, providing evenly cut sections. A-2000 is available in diameters ranging from 4 through 30 inches and in standard lengths of 12.5 feet.

In...

...underground conduits for highway, industrial, municipal and railway applications. HEL-COR pipe is produced in diameters of 6 to 144 inches, with pipe arch sizes of 12 to 144 inches in diameter. CORLIX pipe is manufactured in 6- to 108-inch diameters. Linings and coatings for the pipes are custom designed to meet specific hydraulic and durability...

...PLATE products. ULTRA FLO steel storm pipe, which provides improved hydraulic capacity, is produced in diameters ranging from 18 to 108 inches. Contech's steel perforated pipe is used for high...

...in bridges, stream enclosures and storm sewers. Round MULTI-PLATE structural plate is available in diameters of 60 to 252 inches. These products are manufactured with various combinations of aluminum, galvanized...

Company Names (DIALOG Generated): Contech Construction Products

6/6,K/10 (Item 8 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084765

LARGE DIAMETER PIPE BY MATERIAL: Large Diameter Steel Pipe - Producers

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Word Count: 401 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

LARGE DIAMETER PIPE BY MATERIAL: Large Diameter Steel Pipe - Producers

Main Title: LARGE DIAMETER PIPE TO 2000

A large number of US companies produce large diameter steel pipe either as integrated steel producers, non-integrated producers or fabricators (non-producers of...

...located in Illinois, Ohio, Pennsylvania and Texas. Bethlehem Steel and Oregon Steel are major large diameter steel pipe producers. Other manufacturers include Ameron, Bristol Metals (Synalloy), Contech Construction Products, LB Foster and USX.

Bethlehem Steel's Pennsylvania Steel Technologies unit produces large diameter double submerged arc welded line pipe for use in the oil and gas industries. Pipes range in diameter from 20 to 42 inches and are available in lengths up to 80 feet. Pennsylvania...

...s job site. Oregon Steel's Napa Pipe Corporation produces steel line pipe ranging in diameter from 16 through 42 inches, and in lengths up to 80 feet. Napa is the...

...platform applications.

Ameron produces heavy wall steel pipe for potable water and wastewater applications in diameters ranging between twelve and 144 inches.

Contech Construction Products makes corrugated steel and concrete-lined...

...be used as storm sewers, drainage culverts and stream enclosures. The pipe is available in diameters of six to 144 inches, with pipe arch sizes of 12 to 144 inches in diameter. Contech's ULTRA FLO steel storm pipe is produced in diameters ranging from 18 to 108 inches. Contech's steel perforated pipe is used for high...

...subdrainage applications under highways, railroads and airports.

FOSTERWELD pipe from LB Foster is produced in diameters of 8-5/8 inch through 144 inches, in standard lengths of 40 or 50...

Company Names (DIALOG Generated): Ameron ; Bethlehem Steel ; Construction Products ; Contech Construction Products ; LB Foster ; Napa Pipe Corporation ; Oregon Steel ; Pennsylvania Steel Technologies ; USX

6/6,K/11 (Item 9 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084759

LARGE DIAMETER PIPE BY MATERIAL: Large Diameter Polyvinyl Chloride Pipe
- Producers

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Word Count: 401 (1 pp.)

Leading producers of large diameter polyvinyl chloride pipe in the US are J-M Manufacturing (Formosa Plastics), Vylon/Carlton (Lamson...
...PVC (irrigation pipe).

Lamson VYLON Pipe produces sewer pipe for residential and commercial construction, large diameter pipe for municipal and private sanitary sewer and drainage systems and slip-liner pipe. VYLON PVC sewer and drain pipe is available in diameters ranging up to 18 inches. For sewer main pipes, Lamson Vylon developed a harder, denser...

...other drain pipe,

is produced in seven sizes ranging from 21 to 48 inches in diameter.

PWpipe products include polyvinyl chloride potable water, storm/sewer, irrigation, drain and drain/waste/vent...

...North American Pipe produces sanitary and storm sewer pipe, drain/waste/vent pipe and large diameter cast iron outside diameter PVC pipe. Uponor ETI produces PVC pipe for use in buried water, sewage and drainage...

...CertainTeed (Saint-Gobain), Charlotte Pipe & Foundry, Contech Construction Products and Kroy Industries.

CertainTeed makes large diameter PVC water transmission and other piping. The company's large diameter pipe products include gravity sewer pipe, pressure pipe, CERTA-LOK municipal water pipe, CERTA-LOK...

...applications.

Charlotte Pipe & Foundry makes heavy wall general and industrial drain/waste/vent pipe in diameters ranging from 1-1/4 inches to 16

inches. Contech Construction products produces polyvinyl chloride...
...believed to improve the pipe's durability and creep resistance. A-2000
is available in diameters ranging from 4 through 30 inches and in standard
lengths of 12.5 feet.

Company Names (DIALOG Generated): CertainTeed ; Charlotte Pipe & Foundry ;
Contech Construction Products ; J M Manufacturing ; Kroy
Industries ; Lamson VYLON Pipe ; North American Pipe ; NAPCO
Westlake...

6/6,K/12 (Item 10 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084715

LARGE DIAMETER PIPE BY MARKET: Large Diameter Storm Sewers Pipe -
Producers

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Word Count: 262 (1 pp.)

...pipe rehabilitation market.

Advanced Drainage Systems produces corrugated high density polyethylene
storm sewer pipe in diameters of four through 48 inches. This pipe is
used as a liner for deteriorated metal...

...HI-Q drain pipe is corrugated on the
exterior and smooth on the interior with diameters of four to 48 inches.
In 1995, Hancor began to phase out the TITELINE products...

...line. SURE-LOK pipe is a corrugated high-density
polyethylene pipe that is produced in diameters ranging from 12 to 24
inches in 20-foot lengths. The smooth-interior pipe uses...

...need for glue, split

couplers and wire ties. Hydro Conduit produces concrete sewer pipe with
diameters ranging from twelve to 144 inches.

Company Names (DIALOG Generated): Advanced Drainage Systems ; Ameron ;
CertainTeed ; Concrete Pipe & Products ; Contech Construction
Products ; CSR Limited ; Formosa Plastics ; J M Manufacturing
; Quail Pipe Corporation ; Simpson Investment

6/6,K/13 (Item 11 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00077978

COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: PLASTIC & COMPETITIVE PIPE TO 2000

Pub. Date: MARCH 1995

Word Count: 518 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...design acts as a cutting guide, providing evenly cut sections. A-2000
is available in diameters ranging from 4 through 30 inches and in
standard lengths of 12.5 feet.

The...

...which is flexible enough to get support from surrounding soils. TRUSS PIPE
is available in diameters of 8 to 15 inches.

In addition to plastic pipe, the Company manufactures corrugated steel...

Company Names (DIALOG Generated): Contech Construction Products

6/6,K/14 (Item 12 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00077934

PLASTIC PIPE BY RESIN: Polyvinyl Chloride Pipe - Companies

Main Title: PLASTIC & COMPETITIVE PIPE TO 2000

Pub. Date: MARCH 1995

Word Count: 335 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...municipal storm water).

Lamson Vylon Pipe produces sewer pipe for residential and commercial construction, large diameter pipe for municipal and private sanitary sewer and drainage systems and slipliner pipe. Lamson & Sessions...

...use. North American Pipe produces sanitary and storm sewerpipe, drain/waste/vent pipe and large diameter cast iron outside diameter PVC pipe. Uponor ETI produces PVC pipe for use in buried water, sewage and drainage...

Company Names (DIALOG Generated): American Pipe & Plastics ; American Pipe and Plastics ; CertainTeed ; Charlotte Pipe & Foundry ; Contech Construction Products ; Cresline Plastic ; Detrex ; Eagle Plastics ; Genova Products ; Harvel Plastics ; J M Manufacturing ; Lamson...

File 764:BCC Market Research 1989-2002/Oct

File 763:Freedonia Market Res. 1990-2002/Oct

File 15:ABI/Inform(R) 1971-2002/Oct 28

File 781:ProQuest Newsstand 1998-2002/Oct 28

File 637:Journal of Commerce 1986-2002/Oct 24

File 624:McGraw-Hill Publications 1985-2002/Oct 25

File 608:KR/T Bus.News. 1992-2002/Oct 28

File 553:Wilson Bus. Abs. FullText 1982-2002/Aug

File 649:Gale Group Newswire ASAP(TM) 2002/Oct 23

File 148:Gale Group Trade & Industry DB 1976-2002/Oct 28

File 16:Gale Group PROMT(R) 1990-2002/Oct 25

File 635:Business Dateline(R) 1985-2002/Oct 26

File 613:PR Newswire 1999-2002/Oct 28

File 610:Business Wire 1999-2002/Oct 26

File 9:Business & Industry(R) Jul/1994-2002/Oct 25

Set Items Description

S1 111 CO='CONTECH CONSTRUCTION':CO='CONTECH CONSTRUCTION PRODUCT-S, INC.'

S2 95 RD (unique items)

S3 60 S2/2002 OR S2/2001 OR S2/2000 OR S2/1999

S4 35 S2 NOT S3

S5 161237 DIAMETER? OR DIAMETR?

S6 14 S4 AND S5

File 483:Newspaper Abs Daily 1986-2002/Oct 25

File 248:PIRA 1975-2002/Oct W4

File 323:RAPRA Rubber & Plastics 1972-2002/Dec

File 111:TGG Natl.Newspaper Index(SM) 1979-2002/Oct 24

File 18:Gale Group F&S Index(R) 1988-2002/Oct 28

Set Items Description

S1 32 CO='CONTECH':CO='CONTECH CONSTRUCTION PRODUCTS INC.'

S2 1 CO='PACIFIC CORRUGATED PIPE CO.'

S3 3 CO='PACIFIC ROLLER DAY':CO='PACIFIC ROLLER DIE COMPANY INC.'

S4 36 S1:S3

S5 34 RD (unique items)

S6 25 S5/2002 OR S5/2001 OR S5/2000 OR S5/1999

S7 9 S5 NOT S6

S8 21344 DIAMET?
S9 0 S7 AND S8

10/6,K/1 (Item 1 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00135467

PRIVATE COMPANY PROFILES: Pacific Corrugated Pipe

Main Title: PRIVATE PIPE COMPANIES (1997)

Pub. Date: NOVEMBER 1997

Word Count: 474 (1 pp.)

...custom cut lengths are also available. Standard corrugated metal pipe (CMP) is available in large diameters from 24 to 96 inches. Diameters as small as six inches are also available. CMP is used extensively in flood control...

...of three inches and a depth of one inch. According to the Company, in larger diameters, this corrugation profile allows the use ...strip of galvanized steel, aluminized Type II steel or aluminum alloy. SRP is manufactured in diameters ranging from twelve to 144 inches in steel and twelve to 120 inches in aluminum...

Company Names (DIALOG Generated): Annual Sales ; Pacific Corrugated Pipe
; W E Hall Company

10/6,K/2 (Item 2 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00135382

PRIVATE COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: PRIVATE PIPE COMPANIES (1997)

Pub. Date: NOVEMBER 1997

Word Count: 534 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...concrete lining. Its smooth interior is designed to improve hydraulic efficiency, while its smaller outside diameter provides installation economy. Aluminized Steel Type 2 corrugated pipe is fabricated from steel coils coated...

Company Names (DIALOG Generated): Annual Sales ; Contech Construction
Products ; Key Products

10/6,K/3 (Item 3 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127823

COMPANY PROFILES: Pacific Corrugated Pipe

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 434 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Main Title: LARGE DIAMETER PIPE TO 2001

...custom cut lengths are also available. Standard corrugated metal pipe (CMP) is available in large diameters from 24 to 96 inches.

Diameters as small as six inches are also available. CMP is used extensively in

flood control...

...of three inches and a depth of one inch. According to the Company, in larger diameters, this corrugation profile allows the use of lighter gauge materials for any given loading condition or aluminum alloy. SRP is manufactured in diameters ranging from twelve to 144 inches in steel and twelve to 120 inches in aluminum...

Company Names (DIALOG Generated): Pacific Corrugated Pipe ; W E

10/6,K/4 (Item 4 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127800

COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 613 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Main Title: LARGE DIAMETER PIPE TO 2001

...2, HEL-COR CL and CORLIX pipes.

The ULTRA-FLO storm sewer pipe, produced in diameters ranging from 18 to 108 inches, combines the advantages of steel or aluminum corrugated pipe... between metals. The product is fabricated into pipe and helically corrugated.

The pipe, available in diameters ranging from six to 144 inches, features lock seams or welded seams depending on ...CL's long lengths and lightweight construction significantly reduce installation and transportation costs. Available in diameters ranging from 24 to 108 inches, HEL-COR CL is corrosion-resistant and can be... drainage culverts, stream enclosures and underground conduits for highway, industrial, municipal and railway applications. Large diameter CORLIX is available in sizes ranging from twelve to 24 inches.

Smaller sizes are manufactured in diameters as small as six inches. CORLIX comes with a full line of accessories and fittings... sections. Perforated pipe for underdrainage or recharge systems is also available.

The Company's large diameter plastic pipe product lines include a polyvinyl chloride (PVC) sewer pipe that is sold under...than competitive products such as cast iron or steel pipes.

A-2000 is available in diameters ranging from four to 30 inches.

Diameters ranging from 21 to 30 inches are available in 13-foot lengths while smaller diameters come in twelve-foot lengths...

Company Names (DIALOG Generated): Contech Construction Products

10/6,K/5 (Item 5 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00127778

INDUSTRY STRUCTURE: General/Market Share

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 405 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Main Title: LARGE DIAMETER PIPE TO 2001

The large diameter pipe industry in the US is highly competitive due to the large number of producers...

...and comparative advantages of offshore producers in areas such as labor and government subsidies. Large diameter pipe competition is primarily based on price, quality, service and timely delivery. However, price is...

...products because of needs for longevity and the high cost of premature failure.

The large diameter pipe industry is moderately concentrated with both large, multinational firms and small private companies well...

...Spirolite (Chevron) are prime examples of high density polyethylene producers who are also leading large diameter high density polyethylene pipe producers. Ameron has a diverse product line encompassing concrete, steel and...pipe) and AB&I (cast iron pipe).

Most pipe producers supply a full range of diameters in order to be a broad line supplier and enhance overall competitiveness.

Hydro Conduit (CSR...

...specialty welded steel pipe and tubing products. Bethlehem Steel and Oregon Steel are major large diameter steel pipe producers. Clow (McWane), US Pipe & Foundry and American Cast Iron Pipe are leading...

...is a leading producer of corrugated steel pipe as well as a producer of large diameter polyvinyl chloride sanitary sewer pipe...

...Company Names (DIALOG Generated): American Cast Iron Pipe ; American Pipe ; Ameron ; AB & I ; Bethlehem Steel ; Chevron ; Concrete Pipe & Products ; Contech Construction ; CSR Limited ; Lamson & Sessions ; Lamson Vylon Pipe ; LTV ; Mitsubishi Kagaku ; Oregon Steel ; Petroleum ; PW...

10/6,K/6 (Item 6 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.

00127760

LARGE DIAMETER PIPE BY MARKET: Storm Sewers Market - Names of Key Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 83 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

Company Names (DIALOG Generated): Advanced Drainage Systems ; Ameron ; CertainTeed ; Chevron ; Concrete Pipe & Products ; Contech Construction Products ; Gary Concrete Products ; Lamson & Sessions ; Logan Clay Products ; Mission Clay Products ; MCP Industries...

10/6,K/7 (Item 7 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.

00127749

LARGE DIAMETER PIPE BY MATERIAL: Steel Pipe - Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Word Count: 401 (1 pp.)

Large diameter steel pipe and tube producers include Ameron, Bristol Metals (Synalloy), Contech Construction Products, LB Foster...

...still owned by Foster in June 1997.

Ameron produces heavy wall, welded steel pipe in diameters ranging up to 144-inches for long-term use in conveying potable water and wastewater...

...Bristol Metals (Synalloy) is the largest producer of welded stainless steel pipe in the US. Diameters range from 1/2-inch to 60-inches and are sold under the BRISMET name. Primary...

...aluminized steel and fiberbonded steel varieties with asphalt coatings available on all three types. Large diameters range from 24- to 120-inches.

Applications include high strength drainage applications beneath airports, highways

...clad alloy for use in culverts, storm sewers and stream enclosures.

Napa Pipe manufactures large diameter steel pipe in diameters ranging from 16- to 42-inches primarily for use in pressurized underground or underwater oil...

...produces seamless standard and line pipe used in refining, chemical, construction and petrochemical industries in diameters ranging from two through 26-inches.

Pacific Corrugated Pipe produces standard corrugated metal pipe in large diameters ranging from 24- to 96-inches. Uses primarily encompass drains, sewers and flood control. Pennsylvania Steel Technologies produces steel pipe ranging in diameters from 20- to 42-inches using the company's continuous welding technique, which results in...

Company Names (DIALOG Generated): Ameron ; Bristol Metals ; Contech
Construction Products ; LB Foster ; Napa Pipe ; Pacific
Corrugated Pipe ; Pennsylvania Steel ; Synalloy

10/6,K/8 (Item 8 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.

00127744

LARGE DIAMETER PIPE BY MATERIAL: Plastic Pipe - Polyvinyl Chloride Pipe
Producers

Main Title: LARGE DIAMETER PIPE TO 2001

Pub. Date: JULY 1997

Leading producers of large diameter polyvinyl chloride pipe in the US include J-M Manufacturing (Formosa Plastics), Lamson Vylon (Lamson...
...company is vertically integrated in the production of polyvinyl chloride resins.

Lamson Vylon produces large diameter polyvinyl chloride pipe for applications including sewer and drainage applications. Profile wall PVC pipe with smooth interior and exterior walls is available in diameters between 21- and 48-inches for use in storm, industrial, highway and other drainage uses...

...highway underdrains which has enhanced chemical and corrosion-resistance. North American Pipe (NAPCO) manufactures large diameter PVC pipe for use in municipal water distribution (diameters ranging from 16- to 30-inches) and gravity sewer uses (four- to 30-inch diameters). PW Pipe (Pacific Wester Extruded Plastics) produces PVC pipe for a variety of markets including...Freedom Plastics, Harvel Plastics, Kroy Industries, Rehau and Uponor. CertainTeed produces a variety of large diameter PVC pipe including pressure, gravity sewer pipe and water distribution pipe for industrial, environmental, water, sewer and drainage applications. Contech Construction Products produces the A-2000 line of large diameter polyvinyl chloride sewer pipe designed for sanitary sewer uses. This pipe is constructed with a smooth interior and corrugated exterior for high flow rates and enhanced strength.

Diameters ranging in size from 21- to 30-inches are available in 13 foot lengths.

Diamond Plastics produces large diameter pressure and water and sewer pipe. Water distribution pipe ranges in diameters from 14- to 24-inches. Sewer pipe diameters range from four- to 27-inches.

Freedom Plastics produces large diameter gasketed sewer (four- to 18-inch diameters), Schedule 40 drain, waste and vent pipe (1/2 to 16-inch diameters) and SDR35 sewer and drain pipe (three- to 18-inch diameters).

Gasketed pressure pipe can be used in potable water and other pressure applications. Harvel Plastics (Detrex) produces large diameter polyvinyl chloride pipe for use in industrial applications such as oil refineries, chemical plants, wastewater...

Company Names (DIALOG Generated): Charlotte Pipe & Foundry ; Contech
Construction Products ; Diamond Plastics ; Formosa Plastics ;

Freedom Plastics ; Harvel Plastics ; J M Manufacturing ;
Mitsubishi ; North...

10/6,K/9 (Item 9 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084793
COMPANY PROFILES: Contech Construction Products Incorporated
Main Title: LARGE DIAMETER PIPE TO 2000
Pub. Date: JUNE 1995
Word Count: 489 (1 pp.)
...estimated at \$150 million. The Company employs 800 and is privately held.
Contech's large diameter plastic pipe product line consists of polyvinyl chloride (PVC) sewer pipe. The PVC sewer pipe...
...design acts as a cutting guide, providing evenly cut sections. A-2000 is available in diameters ranging from 4 through 30 inches and in standard lengths of 12.5 feet.
In...
...underground conduits for highway, industrial, municipal and railway applications. HEL-COR pipe is produced in diameters of 6 to 144 inches, with pipe arch sizes of 12 to 144 inches in diameter. CORLIX pipe is manufactured in 6- to 108-inch diameters. Linings and coatings for the pipes are custom designed to meet specific hydraulic and durability...
...PLATE products. ULTRA FLO steel storm pipe, which provides improved hydraulic capacity, is produced in diameters ranging from 18 to 108 inches. Contech's steel perforated pipe is used for high...
...in bridges, stream enclosures and storm sewers. Round MULTI-PLATE structural plate is available in diameters of 60 to 252 inches. These products are manufactured with various combinations of aluminum, galvanized...
Company Names (DIALOG Generated): Contech Construction Products

10/6,K/10 (Item 10 from file: 763)
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00084765
LARGE DIAMETER PIPE BY MATERIAL: Large Diameter Steel Pipe - Producers
Main Title: LARGE DIAMETER PIPE TO 2000
Pub. Date: JUNE 1995
Word Count: 401 (1 pp.)
A large number of US companies produce large diameter steel pipe either as integrated steel producers, non-integrated producers or fabricators (non-producers of...
...located in Illinois, Ohio, Pennsylvania and Texas. Bethlehem Steel and Oregon Steel are major large diameter steel pipe producers. Other manufacturers include Ameron, Bristol Metals (Synalloy), Contech Construction Products, LB Foster and USX.
Bethlehem Steel's Pennsylvania Steel Technologies unit produces large diameter double submerged arc welded line pipe for use in the oil and gas industries. Pipes range in diameter from 20 to 42 inches and are available in lengths up to 80 feet. Pennsylvania...
...s job site. Oregon Steel's Napa Pipe Corporation produces steel line pipe ranging in diameter from 16 through 42 inches, and in lengths up to 80 feet. Napa is the...
...platform applications.
Ameron produces heavy wall steel pipe for potable water and wastewater applications in diameters ranging between twelve and 144 inches. Contech Construction Products makes corrugated steel and concrete-lined...

...be used as storm sewers, drainage culverts and stream enclosures. The pipe is available in diameters of six to 144 inches, with pipe arch sizes of 12 to 144 inches in diameter. Contech's ULTRA FLO steel storm pipe is produced in diameters ranging from 18 to 108 inches. Contech's steel perforated pipe is used for high...

...subdrainage applications under highways, railroads and airports.

FOSTERWELD pipe from LB Foster is produced in diameters of 8-5/8 inch through 144 inches, in standard lengths of 40 or 50...

Company Names (DIALOG Generated): Ameron ; Bethlehem Steel ; Construction Products ; Contech Construction Products ; LB Foster ; Napa Pipe Corporation ; Oregon Steel ; Pennsylvania Steel Technologies ; USX

10/6,K/11 (Item 11 from file: 763)
DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084759

LARGE DIAMETER PIPE BY MATERIAL: Large Diameter Polyvinyl Chloride Pipe
- Producers

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Leading producers of large diameter polyvinyl chloride pipe in the US are J-M Manufacturing (Formosa Plastics), Vylon/Carlton (Lamson...
...PVC (irrigation pipe).

Lamson VYLON Pipe produces sewer pipe for residential and commercial construction, large diameter pipe for municipal and private sanitary sewer and drainage systems and slip-liner pipe. VYLON PVC sewer and drain pipe is available in diameters ranging up to 18 inches. For sewer main pipes, Lamson Vylon developed a harder, denser...

...other drain pipe, is produced in seven sizes ranging from 21 to 48 inches in diameter.

PW Pipe products include polyvinyl chloride potable water, storm/sewer, irrigation, drain and drain/waste/vent...

...North American Pipe produces sanitary and storm sewer pipe, drain/waste/vent pipe and large diameter cast iron outside diameter PVC pipe. Uponor ETI produces PVC pipe for use in buried water, sewage and drainage...

...CertainTeed (Saint-Gobain), Charlotte Pipe & Foundry, Contech Construction Products and Kroy Industries.

CertainTeed makes large diameter PVC water transmission and other piping. The company's large diameter pipe products include gravity sewer pipe, pressure pipe, CERTA-LOK municipal water pipe, CERTA-LOK...

...applications.

Charlotte Pipe & Foundry makes heavy wall general and industrial drain/waste/vent pipe in diameters ranging from 1-1/4 inches to 16 inches. Contech Construction products produces polyvinyl chloride...

...believed to improve the pipe's durability and creep resistance. A-2000 is available in diameters ranging from 4 through 30 inches and in standard lengths of 12.5 feet.

Company Names (DIALOG Generated): CertainTeed ; Charlotte Pipe & Foundry ; Contech Construction Products ; J M Manufacturing ; Kroy Industries ; Lamson VYLON Pipe ; North American Pipe ; NAPCO Westlake...

10/6,K/12 (Item 12 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00084715

LARGE DIAMETER PIPE BY MARKET: Large Diameter Storm Sewers Pipe -
Producers

Main Title: LARGE DIAMETER PIPE TO 2000

Pub. Date: JUNE 1995

Word Count: 262 (1 pp.)

...pipe rehabilitation market.

Advanced Drainage Systems produces corrugated high density polyethylene storm sewer pipe in diameters of four through 48 inches. This pipe is used as a liner for deteriorated metal...

...HI-Q drain pipe is corrugated on the exterior and smooth on the interior with diameters of four to 48 inches. In 1995, Hancor began to phase out the TITELINE products...

...line. SURE-LOK pipe is a corrugated high-density polyethylene pipe that is produced in diameters ranging from 12 to 24 inches in 20-foot lengths. The smooth-interior pipe uses...

...need for glue, split couplers and wire ties. Hydro Conduit produces concrete sewer pipe with diameters ranging from twelve to 144 inches.

Company Names (DIALOG Generated): Advanced Drainage Systems ; Ameron ; CertainTeed ; Concrete Pipe & Products ; Contech Construction Products ; CSR Limited ; Formosa Plastics ; J M Manufacturing ; Quail Pipe Corporation ; Simpson Investment

10/6,K/13 (Item 13 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00077978

COMPANY PROFILES: Contech Construction Products Incorporated

Main Title: PLASTIC & COMPETITIVE PIPE TO 2000

Pub. Date: MARCH 1995

Word Count: 518 (1 pp.)

...design acts as a cutting guide, providing evenly cut sections. A-2000 is

available in diameters ranging from 4 through 30 inches and in standard lengths of 12.5 feet.

The...

...which is flexible enough to get support from surrounding soils. TRUSS PIPE is

available in diameters of 8 to 15 inches.

In addition to plastic pipe, the Company manufactures corrugated steel...

Company Names (DIALOG Generated): Contech Construction Products

10/6,K/14 (Item 14 from file: 763)

DIALOG(R)File 763:(c) 2002 Freedonia Group Inc. All rts. reserv.
00077934

PLASTIC PIPE BY RESIN: Polyvinyl Chloride Pipe - Companies

Main Title: PLASTIC & COMPETITIVE PIPE TO 2000

Pub. Date: MARCH 1995

Word Count: 335 (1 pp.)

...municipal storm water).

Lamson Vylon Pipe produces sewer pipe for residential and commercial construction, large diameter pipe for municipal and private sanitary sewer and drainage systems and slipliner pipe. Lamson & Sessions...

...use. North American Pipe produces sanitary and storm sewerpipe, drain/waste/vent pipe and large diameter cast iron outside diameter PVC

pipe. Uponor ETI produces PVC pipe for use in buried water, sewage and drainage...

Company Names (DIALOG Generated): American Pipe & Plastics ; American Pipe and Plastics ; CertainTeed ; Charlotte Pipe & Foundry ; Contech Construction Products ; Cresline Plastic ; Detrex ; Eagle Plastics ; Genova Products ; Harvel Plastics ; J M Manufacturing ; Lamson...

10/6,K/15 (Item 1 from file: 764)

DIALOG(R)File 764:(c) 2002 Business Communication Co. All rts. reserv.
00077893

PIPE INDUSTRY: SUPPLIER INFORMATION/PROFILES: PLASTIC PIPE AND TUBING
SUPPLIERS: VINYL (PVC/CPVC) - PART II

Main Title: THE COMPETITIVE PIPE INDUSTRY

Pub. Date: JULY 1997

Word Count: 246 (1 pp.)

...high pressure pipe for municipal use. It also is expanding its capacity to make larger diameter pipe from the current 12 inch max. to 24 inches....

Company Names (DIALOG Generated): Boyd Corp ; Contech Construction Products Inc ; Diamond Plastics Corp ; Eagle Pacific Industries Inc ; Extrusion Technologies Inc ; Freedom Plastics...

10/6,K/16 (Item 2 from file: 764)

DIALOG(R)File 764:(c) 2002 Business Communication Co. All rts. reserv.
00077887

PIPE INDUSTRY: SUPPLIER INFORMATION/PROFILES: CORRUGATED STEEL SUPPLIERS

Main Title: THE COMPETITIVE PIPE INDUSTRY

Pub. Date: JULY 1997

Word Count: 184 (1 pp.)

* FOR FULL TEXT, USE FORMAT 9 *

...pipe is a large and separate industry, since this product is primarily made in larger diameters for drainage from roads, etc. Because of the size and weight of the pipe, it...

Company Names (DIALOG Generated): Amatek Holdings ; Armco Steel ; Choctaw Inc ; Construction Products ; Contech Construction Products Inc ; Lane Enterprises ; Pacific Corrugated Pipe Co ; Wheeling Pittsburgh Steel Corp ; Wheeling Corrugating Co ; WHX Corporation

10/6,K/17 (Item 1 from file: 148)

DIALOG(R)File 148:(c)2002 The Gale Group. All rts. reserv.
03516646 SUPPLIER NUMBER: 06350788 (USE FORMAT 7 OR 9 FOR FULL TEXT)

US spiral rib pipe cos. pursue sizeable share of storm drain market.

(spiral rib steel pipe)

May 16, 1988

WORD COUNT: 556 LINE COUNT: 00044

... pipe and the edges joined by lock-seam crimping. The resulting pipe is made in diameters of 18 to 144 inches and in lengths of 20 to 30 feet. Producers claim...

COMPANY NAMES: Pacific Corrugated Pipe Co ...

10/6,K/18 (Item 1 from file: 583)

DIALOG(R)File 583:(c) 2002 The Gale Group. All rts. reserv.
06439909

Korporatsiya AFC

RUSSIA: TUBE PRODUCING PLANT TO BE BUILT
27 Feb-5 Mar 1997

... of Magnitogorsk is prepared to build a plant to produce spiral-seam tubes of large diameter with two-side polymer insulation. For the purpose, the company is to be credited by...

COMPANY: PACIFIC ROLLER DAY ; STAL-PROKAT-TRUBY; MAGNITOGORSKY
METALLURGICHESKY KOMBINAT (MAGNITKA); GAZPROM; RASP

10/6,K/19 (Item 2 from file: 583)
DIALOG(R)File 583:(c) 2002 The Gale Group. All rts. reserv.
06431812

Magnitogorsky metallurgichesky

RUSSIA: NEW JV TO MAKE PIPES WILL BE REGISTERED
12 Feb 1997

A new Russian-American joint-venture, RASP, to produce spiral large diameter pipes for oil and gas pipelines in northern areas, is planned to be established. The...

COMPANY: PRD; PACIFIC ROLLER DIE ; STAL-PROKAT-TRUBY; MAGNITOGORSKY
METALLURGICHESKY ZAVOD; RASP

10/6,K/20 (Item 3 from file: 583)
DIALOG(R)File 583:(c) 2002 The Gale Group. All rts. reserv.
06159880

USA funds study for Russian pipe mill

US: PRD TO CONDUCT RUSSIAN PIPE MILL STUDY
29 May 1995

... Pacific Roller Die (PRD) is conducting a feasibility study into a joint venture with large-diameter pipe manufacturer Volsky Trubniy Zavod (VTZ) based in Volgograd. PRD could be a possible equity...

COMPANY: VOLSKY TRUBNIY ZAVOD; PACIFIC ROLLER DIE

File 763:Freedonia Market Res. 1990-2002/Oct
File 624:McGraw-Hill Publications 1985-2002/Oct 25
File 764:BCC Market Research 1989-2002/Oct
File 148:Gale Group Trade & Industry DB 1976-2002/Oct 28
File 583:Gale Group Globalbase(TM) 1986-2002/Oct 26
File 9:Business & Industry(R) Jul/1994-2002/Oct 25
File 16:Gale Group PROMT(R) 1990-2002/Oct 25

Set	Items	Description
S1	12	CO='PACIFIC CORRUGATED PIPE':CO='PACIFIC CORRUGATED PIPE CO.'
S2	82	CO='CONTECH CONSTRUCTION':CO='CONTECH CONSTRUCTION PRODUCTS INC.'
S3	10	CO='PACIFIC ROLLER DAY':CO='PACIFIC ROLLER DIE COMPANY INC.'
S4	2	CO='LANE METAL':CO='LANE METAL PRODUCTS'
S5	101	S1:S4
S6	94	RD (unique items)
S7	57	S6/2002 OR S6/2001 OR S6/2000 OR S6/1999
S8	37	S6 NOT S7
S9	121046	DIAMET?
S10	20	S8 AND S9

File 411:DIALINDEX(R)
You have 548 files in your file list.
Your SELECT statement is:
s diameter()pipe(10n)180()inch??
Items File

Examined 50 files
Examined 100 files
Examined 150 files
Examined 200 files
Examined 250 files
Examined 300 files
Examined 350 files
Examined 400 files
Examined 450 files
Examined 500 files

No files have one or more items; file list includes 548 files.

L5 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:803037 HCAPLUS
TI Fireproof bushing production device. [Machine Translation].

L5 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:637067 HCAPLUS
TI Support leg and false floor for floor panel. [Machine Translation].

L5 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:571547 HCAPLUS
TI Method of manufacturing a fuel inlet

L5 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:364487 HCAPLUS
TI Incinerator. [Machine Translation].

L5 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:244901 HCAPLUS
TI ***Spiral*** type separated membrane element. [Machine Translation].

L5 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:202433 HCAPLUS
TI Lining operation method and its operation device inside sewer. [Machine Translation].

L5 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:762493 HCAPLUS
TI EGR gas cooling system. [Machine Translation].

L5 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:753231 HCAPLUS
TI Welding torch. [Machine Translation].

L5 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:741643 HCAPLUS
DN 136:39383
TI Effects of ***tube*** ***diameter*** and tubeside fin geometry on the heat transfer performance of air-cooled condensers

L5 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:25826 HCAPLUS
TI ***Spiral*** sampler

L5 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:33611 HCAPLUS

DN 120:33611

TI Heat transfer and pressure drop during evaporation and condensation of
Refrigerant-22 in 7.5 mm and 10 mm ***diameter*** axial and
helical ***grooved*** ***tubes***

L5 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:768388 HCAPLUS

TITLE: The heat exchanger ***tube*** and its production
method and the multi ***tube*** type regenerators
and the radiator installed type oil cooler which use
this heat exchanger ***tube*** . [Machine
Translation].

INVENTOR(S): Takikawa, Kazuyoshi; Miyauchi, Yuji; Serizawa,
Haruo; Goto, Tadahiro

PATENT ASSIGNEE(S): Usui Kokusai Sangyo Kaisha Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2002295987	A2	20021009	JP 2001-94958	20010329
AB	[Machine Translation of Descriptors]. Obtaining the heat exchanger ***tube*** which is superior in heat transfer characteristic, the heat transfer inside of ***pipe*** section it makes that exchanger exchanging of the fluid and the heat transfer outside section which flow is done efficiently possible. Fin 3 of the flat condition which was formed ***helically*** , width and of this fin 3 equal inside ***diameter*** is inserted into element ***tube*** 1 it possesses abbreviation. In the wall surface of element ***tube*** 2, it forms the ***helical*** ***spiral*** ***groove*** 4 of the one or plural books in insertion state of this fin, 3 the inside perimeter aspect makes with the both sides edge 5 of 6 of element ***tube*** 2 and fin stick 3.				

L5 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:368115 HCAPLUS

TITLE: Large-sized ***tube*** . [Machine Translation].

INVENTOR(S): Kanao, Shigeki

PATENT ASSIGNEE(S): Kana Flex Corp. K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2002139178	A2	20020517	JP 2000-337042	20001106

AB [Machine Translation of Descriptors]. There is a point where be able control the fact that it becomes hight cost of production furthermore as, connected job can be done easily quickly, it tries to be able do the dead water securely. Inside ***diameter*** size with the synthetic resin make above 1000mm, at the same time, ***helical*** convex section 2A and concave section 2b are located alternately with ***tube*** axial core direction or with annulation, at the same time, flange 1 for ***tube*** connection is made to provide at least for one end of the large-sized ***tube*** 2 which was formed to the ***ripple*** mark.

L5 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:252169 HCAPLUS

TITLE: ***Spiral*** ***corrugated*** metal
pipe elbow and the production method.

[Machine

Translation].

INVENTOR(S): Yoshida, Ryushi; Egoshi, Kimihiro

PATENT ASSIGNEE(S): Totaku Kogyo K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001099379	A2	20010410	JP 1999-275175	19990928

AB [Machine Translation of Descriptors]. The ***spiral*** ***tube*** elbow and this kind of elbow of the structure whose anxiety of damage and the water leakage is little offer of the technology which produces easily quickly. ***Spiral*** wall shell P of specified length, leaving the part place A of the ***tube*** circumferential direction, the cutting stripping after being done, the cut surface, connection this is done in the side apparent abbreviation V shape of character non-disruption ***tube*** wall place A as large ***diameter*** side being bent, said connection this section t the bonding is done in water tight condition by bonding raw material m. In addition, 2nd constitution is done, connection this section t of the aforementioned cut surface, thread portion 2 of the ***spiral*** ***ripple*** mark of the shell and thread portion 2, valley section connection this being done with the form where abbreviates opposes with 3 and valley section 3, the bonding.

(FILE 'HOME' ENTERED AT 14:54:01 ON 28 OCT 2002)

FILE 'HCAPLUS' ENTERED AT 14:54:12 ON 28 OCT 2002

L1 442610 S PIPE OR PIPES OR PIPING OR TUBE OR TUBES OR TUBING

L2 142772 S SPIRAL? OR HELIX? OR HELIC?

L3 77423 S CORRUGAT? OR RIPPL? OR RIDGE? OR GROOVE?

L4 19202 S DIAMET?

L5 14 S L1 AND L2 AND L3 AND L4

9/6,K/1 (Item 1 from file: 35)

DIALOG(R)File 35:(c) 2002 ProQuest Info&Learning. All rts. reserv.

01443466 ORDER NO: AADAA-I1375054

PRESSURE DROP AND HEAT TRANSFER MEASUREMENTS OF TURBULENT INTERNAL FLOW IN GROOVED TUBES

Year: 1995

...experimental heat transfer and pressure drop study for water flow in circular smooth and internally grooved tubes. Copper tubes of 9.5 mm and 7.0 mm outer diameters are used. Grooved tubes have spiral grooves with $\$25\backslash\text{sp}\backslash\text{circ}\backslash\text{pm} 2\backslash\text{sp}\backslash\text{circ}\$$ helix angle, 0.12 mm $\$ \backslash\text{pm}\$$ 0.02 mm groove depth, 0.45 mm pitch in 9.5 mm tubes; $\$18\backslash\text{sp}\backslash\text{circ}\backslash\text{pm} 2\backslash\text{sp}\backslash\text{circ}\$$ helix angle, 0.15 mm $\$ \backslash\text{pm}\$$ 0.02 mm groove depth, 0.32 mm pitch in 7.0 mm tubes. Measured friction factor and heat transfer data are compared with data in literature.

Pressure drop of turbulent water flow in internally grooved multi-pass heat exchangers was documented. Copper tubes of 10.6 mm and 7.8 mm outer diameters are involved. Spiral grooves have $\$17.2\backslash\text{sp}\backslash\text{circ}\backslash\text{pm} 1\backslash\text{sp}\backslash\text{circ}\$$ helix angle, 1.87 mm pitch in 10.6 mm tubes; $\$25\backslash\text{sp}\backslash\text{circ}\backslash\text{pm} 1\backslash\text{sp}\backslash\text{circ}\$$ helix angle, 0.88 mm pitch in 7.8 mm tubes. Measured friction factor data are compared with pressure drop data of 9.5 mm and 7.0 mm single grooved copper tubes.

9/6,K/2 (Item 2 from file: 35)

DIALOG(R)File 35:(c) 2002 ProQuest Info&Learning. All rts. reserv.
738600 ORDER NO: AAD81-04593

ULTRASTRUCTURAL AND EXPERIMENTAL INVESTIGATIONS OF THE EUGLENOID

Year: 1980

...ball of mucilaginous material or may themselves be ejected from the cell through the pellicular grooves. Ejected mucocysts show a uniform structure consisting of an inner tube with helical striations, an outer tube with a diamond-shaped pattern, and a dense middle band. Fine fibrils 8-9 nm in diameter emanate from mucocyst tips.

The ingestion or feeding apparatus consists of a prominent rodorgan, a...
...rodorgan to the flagellar bases.

Typical euglenoid diagnostic features in Peranema include the pellicular striae, helical symmetry, dictyosomes, contractile vacuole and reservoir. Ruthenium red labeling, indicative of acid mucopolysaccharide constituents, is...

9/6,K/3 (Item 1 from file: 323)

DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00718956

TITLE: ULTIMATE MECHANICAL PERFORMANCE OF A FILAMENT WOUND GLASS FIBRE-REINFORCED EPOXY (GRE) PIPELINE

...ABSTRACT: weight ratio and the corrosion resistant properties of these material systems. A 12 in. internal diameter glass fibre-reinforced epoxy pipeline with winding angles of + or -55 deg. and a wall...
...on an integral helically wound key-lock that is assembled between the male and female pipe joint ends. This key-lock consists of a groove with 10 helical windings in the male and female pipe ends and the groove contains a cylindrical polyamide key to carry the axial load due the internal pressure within the pipe. The hydrostatic seal to prevent leakage of fluid through the joint is provided by means of an elastomeric O-ring situated in a groove on the male component of the joint. A 3 m long jointed section of pipeline is tested by varying the internal pressure of the pipe from zero to 150 bar and by monitoring the strain behaviour at three different sites along the pipe. The pipe is instrumented with strain gauges for the measurement of axial

and hoop strains. 9 refs.
...SUBJECT HEADING (RAPRA): pipes , ...
... pipes , ...
...reinforced epoxy resins; PIPES ,
...DESCRIPTORS: COMPANY; COMPOSITE; CRACKING; DATA; EPOXIDE RESIN; EPOXY
RESIN; EQUATION; FILAMENT WINDING; GRAPH; HYDROSTATIC; MECHANICAL
PROPERTIES; PIPE ; PLASTIC; POLYEPOXIDE; PROPERTIES; REINFORCED
PLASTIC; REINFORCED PLASTICS; TAPE WINDING; TECHNICAL; THERMOSET; WALL
THICKNESS

9/6,K/4 (Item 2 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00682022

TITLE: CORRUGATED PIPES
ABSTRACT: Itib Machinery has demonstrated the latest developments in the
production of HDPE double-wall corrugated conduit pipes used to
protect telecommunications cables. Most models in the current F range
of corrugating machines use the vacuum moulding system which gives
very small diameters , better material distribution and improved
surface appearance. Sica has produced bellling machines up to 1200mm in
response to the request for socketing structural pipes of large
diameter .

SUBJECT HEADING (RAPRA): PIPES , ...

... corrugating , ...
... pipes , corrugating ...
...corrugating,

DESCRIPTORS: AUTOMATION; BELLING; COMPANIES; COMPANY; COMPUTER CONTROL;
CONDUIT; COOLING; CORRUGATED ; COST; DATA; DIAMETER ; DOUBLE WALLED;
DOUBLE-WALLED; ETHYLENE POLYMER; EXTRUDING; EXTRUSION; FORMING; HDPE;
HEATED; HEATING; HIGH DENSITY POLYETHYLENE...
...POLYETHYLENE; MACHINE; MACHINERY; MANDREL; MOLD; MOLD CHANGING; MOULD;
MOULD CHANGING; MULTI-LAYER; MULTILAYER; OUTPUT; PE; PIPE ; PLASTIC;
POLYETHYLENE; POLYPROPENE; POLYPROPYLENE; POLYVINYL CHLORIDE; PP;
PRODUCTION COST; PVC; QUICK MOLD CHANGING; QUICK MOULD CHANGING; RIBBED
; SLEEVE; SOCKET; SPIRAL ; THERMOPLASTIC; VACUUM FORMING ; WEIGHT
REDUCTION

9/6,K/5 (Item 3 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00670207

TITLE: APPARATUS FOR PRODUCING CORRUGATED TUBE
PATENT DATE: 19970902

...ABSTRACT: roller assembly composed of plural rollers having plural
convexed rings, respective convexed rings forming a helix as a whole
so as not to substantially form a single rotating shaft body, and...
...of synthetic resin onto the roller assembly. The pitches between the
convexed rings, and the diameters and widths of the convexed rings
are so constructed as to be gradually decreased in...

SUBJECT HEADING (RAPRA): TUBES , corrugated ...

...corrugated

DESCRIPTORS: APPARATUS; COMPANIES; COMPANY; CORRUGATED ; ELASTOMER;
PLASTIC; RUBBER; TECHNICAL; THERMOPLASTIC; THERMOSET; TUBE

9/6,K/6 (Item 4 from file: 323)
DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00605068

TITLE: WELDABLE PIPE FITTINGS AND METHODS OF FORMING THE SAME
PATENT DATE: 19960904

ABSTRACT: A groove , at least the majority of which is helical or spiral, is disposed in or on a fusion wall of the fitting, from an...
...part to an inner part thereof and an electrical heating wire is located within the groove and connected at each end to an input/output terminal. A lead-in portion of the groove is disposed entering from the outer part of the fitting to the inner part, and...
...of its length at a depth which at its least is substantially more than the diameter of the heating wire. A helical or spiral portion of the groove continuing from the lead-in portion thereof runs from the inner part of the fitting...
...wire being disposed on the fitting at or adjacent the outer part thereof, and the helical or spiral portion of the groove , and the wire disposed therein, overlying the lead-in portion of the wire and the groove .

SUBJECT HEADING (RAPRA): PIPE FITTINGS

DESCRIPTORS: COMPANY; DIAGRAM; ELECTRICITY; FUSION; GROOVED ; HEATING WIRE ; HELICAL ; PIPE FITTING ; PLASTIC; SPIRAL; TECHNICAL; WELDABILITY

9/6,K/7 (Item 5 from file: 323)

DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00527996

TITLE: HIGH PRECISION AND DURABLE CORRUGATED PIPE MANUFACTURING APPARATUS

PATENT DATE: 19940526

...ABSTRACT: unit for feeding synthetic resin strips to the roller assembly. Each roller forms a generally helical body due to the projecting rings and constitutes a rotary shaft. The pitch, diameter and width of the projecting rings are reduced gradually in accordance with the coefficient of...

SUBJECT HEADING (RAPRA): CORRUGATING , ...

... pipes ; PIPES , ...

... corrugating machines

DESCRIPTORS: COMPANY; CONTRACTION; CORRUGATED ; DIAGRAM; DIAMETER ; DURABILITY; HELICAL ; MACHINE; MACHINERY; PIPE ; PLASTIC; PRECISION; ROLLER; TECHNICAL; WIDTH

9/6,K/11 (Item 9 from file: 323)

DIALOG(R)File 323: (c) 2002 RAPRA Technology Ltd. All rts. reserv.
00253231

TITLE: LEADER IN CORRUGATED PLASTIC PIPE PRODUCTION SYSTEMS

ABSTRACT: Details are presented on the machinery and manufacturing methods used to produce corrugated plastic pipes and tubes . Information is included on general corrugating systems, high-speed perforators for drainage tubing , corrugators for large diameter pipes , corrugators for double wall pipes , spiral winding systems and coilers.

SUBJECT HEADING (RAPRA): PIPES ; HOSES; TUBING ; EXTRUDERS... pipes

DESCRIPTORS: APPLICATIONS; COIL; COMPANY; COMPANIES; COOLING; CORRUGAT ; DIAMETER ; DOUBLE WALLED; DOUBLE-WALLED; DRAINAGE PIPE ; EXTRUDER; EXTRUSION; HOSE; MACHINERY; MOULD; PERFORAT; PIPE ; PLASTIC; PROCESSING; SPIRAL WIND ; TUBING ; TUBE ; MOLD

9/7/8 (Item 6 from file: 323)

DIALOG(R)File 323:RAPRA Rubber & Plastics